

**A REVIEW OF THE DEPARTMENT OF ENERGY'S
YUCCA MOUNTAIN PROJECT, AND PROPOSED
LEGISLATION TO ALTER THE NUCLEAR WASTE
TRUST FUND**

HEARING
BEFORE THE
SUBCOMMITTEE ON ENERGY AND AIR QUALITY
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED EIGHTH CONGRESS
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ON
H.R. 3429 and H.R. 3981

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A REVIEW OF THE DEPARTMENT OF ENERGY'S YUCCA MOUNTAIN PROJECT, AND PROPOSED LEGISLATION TO ALTER THE NUCLEAR WASTE TRUST FUND (H.R. 3429 AND H.R. 3981)

THURSDAY, MARCH 25, 2004

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 2123, Rayburn House Office Building, Hon. Ralph M. Hall (chairman) presiding.

Members present: Representatives Hall, Burr, Norwood, Shimkus, Wilson, Walden, Otter, Sullivan, Barton (ex officio), Boucher, Allen, Markey, and Green.

Also present: Representative Greenwood.

Staff present: Mark Menezes, special counsel; Dwight Cates, professional staff; Peter Kielty, legislative clerk; Bruce Harris, minority counsel; and Sue Sheridan, minority counsel.

Mr. HALL. All right. The subcommittee will come to order. I want to welcome everyone to today's hearing on the status of the Yucca Mountain Project, and Proposed Legislation to Alter the Nuclear Waste Trust Fund. Without objection, the subcommittee is going to proceed pursuant to Committee Rule 4(e), which governs opening statements by Members, and the opportunity to defer them for the extra questioning time.

Because we know of the time demands on our first panel, and in respect to them, Congressman Boucher has agreed to defer opening statements until we have the testimony of you three.

And at this time, we are honored to have you. I think your appearance here today and the testimony that you are going to give will reflect the fact that you are representatives that we represent. We represent a district, and you are here doing a good job of representing yours.

And at this time I would rather recognize Mrs. Berkley, but I will go in the order of seniority, or the most handsome, or the oldest. How do you want to proceed?

Mr. GIBBONS. I qualify on 2 out of 3 of those, one being the oldest.

Mr. HALL. I recognize Congressman Gibbons.

STATEMENTS OF HON. JIM GIBBONS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA; HON. SHELLY BERKLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA; AND HON. JOHN C. PORTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA

Mr. GIBBONS. Thank you, Mr. Chairman.

Mr. HALL. Take as long as you need.

Mr. GIBBONS. Well, thank you, Mr. Chairman, and I will try to be brief, and I want to again thank you for allowing me to testify again before this important committee on this very critical issue that affects Nevada.

Now, Mr. Chairman, I represent every county in the State of Nevada, including Nye County, which includes Yucca Mountain, and this sensitive issue has long been one of my gravest concerns in my representation of the people of Nevada.

In fact, the proposed high-level nuclear waste repository at Yucca Mountain and the ongoing fight against it, is absolutely the No. 1 grievance that Nevadans have with the Federal Government.

And despite my sincere appreciation for being invited here today to present my side of the Yucca Mountain case, I must make it clear from the outset that my views on this proposed repository are in stark contrast with those of the majority of the members of the committee.

However, as long as the voters elect me to public office, I will continue to fight to prevent the Yucca Mountain repository from ever becoming our Nation's nuclear waste storage dump.

My reasons for opposing the Yucca Mountain waste repository are manifold. These reasons range from security concerns regarding possible terrorist sabotage of the waste shipments, to fiscal concerns with continuing to burden the hardworking taxpayers of this Nation with the ever-rising costs of this Department of Energy boondoggle.

At issue before the subcommittee today are two topics; progress on the Yucca Mountain project overall, and consideration of legislation aiming to dramatically alter the nuclear waste trust fund, and to take the Yucca Mountain project off the budget completely.

Regarding progress on the nuclear waste repository overall, I firmly believe that forward progress on this project is impossible. With every dollar spent in an attempt to make the Yucca Mountain waste repository feasible, additional flaws that should render the project unsuitable for licensing have been and continue to be exposed.

The scientific safety, and health, and environment concerns surrounding the proposed waste repository are well documented, and I will not spend my time here today reiterating them before the subcommittee.

However, I would ask that you take these concerns seriously before making any decision on the future progress of Yucca Mountain. I would like to take this opportunity, Mr. Chairman, to address the second issue at hand before the subcommittee today, which is consideration of two bills designed to alter the nuclear waste trust fund, H.R. 3429 and H.R. 3981.

Mr. Chairman, I don't think it is ambiguous that I strongly oppose any language that would eliminate Congressional oversight

over the annual Yucca Mountain funding process, and both of these bills would have that effect.

H.R. 3981 and H.R. 3481 would both allow utility company contributions to be credited to the nuclear waste fund as offsetting collections, and thus severely limiting Congress' ability to oversee and manage how DOE spends these funds annually.

As I previously stated, I have serious concerns with the DOE's management of the Yucca Mountain project, and annual Congressional oversight of the funding appropriated for this project is absolutely key in executing our duty of ensuring that every cent of American taxpayer dollars is spent responsibly and efficiently.

Certainly the unanswered scientific question of public safety and health concerns, and the unresolved issue of how nuclear waste will be shipped across the country to Yucca Mountain warrant further examination before Congress allows our oversight of this proposed repository to be rescinded.

At a time when Congress should be tightening its spending belt, it would be irresponsible for us to allow funding to increase at an astronomical rate for a project that may very well be proven unfeasible before it is even licensed.

I strongly encourage this subcommittee not to move forward on these legislative proposals. Instead, Congress must work to identify an alternative to the Yucca Mountain plan. The idea of burying one of the most toxic substances known to man underground and isolating it for 10,000 years was devised nearly 20 years ago.

Over the past two decades scientific advances have demonstrated that the geologic burial of nuclear waste is just that, a waste. Congress cannot provide for the squandering of our Nation's limited resources on a project that has been proven over, and over again, to be a disaster both scientifically and fiscally.

Congress should not and cannot abdicate its oversight responsibilities of a billion dollar project. Such a decision would be a disservice to every taxpayer in America. And with that said, I once again register my opposition to continuing along the disastrous path of burying our Nation's nuclear waste in my Congressional district.

I offer my strongest support for working together toward a modern alternative solution to geologic burial of high level nuclear waste, and propose that Congress maintain its constitutional authority over spending and the use of taxpayer dollars.

Mr. Chairman, with that said, again I would ask that the committee rebuff the proposals that are continuing in these two bills, H.R. 3429 and 3981, and I would yield back the balance of any time that I may have remaining, and I thank you again for the courtesy of allowing me to testify. And I would be open for any questions that you may have.

[The prepared statement of Hon. Jim Gibbons follows:]

PREPARED STATEMENT OF HON. JIM GIBBONS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA

Mr. Chairman, thank you for inviting me to testify at this important hearing today.

This issue has always been of the utmost concern to me and to many of my constituents.

I represent every county in Nevada, including Nye County which includes Yucca Mountain.

In fact, the proposed high-level nuclear waste repository at Yucca Mountain, and the ongoing fight against it, is absolutely the number one grievance Nevadans have with the federal government.

Despite my sincere appreciation for being invited to present my side of the Yucca Mountain case here today, I must make it very clear from the outset that my views on this proposed repository contrast quite severely with those of the majority of the Members of this Committee.

However, as long as the voters in Nevada elect me to public office, I will continue to fight to prevent the Yucca Mountain repository from ever becoming our nation's nuclear waste storage dump.

My reasons for opposing the Yucca Mountain waste repository are manifold, ranging from an urgent need to protect the health and safety of all Americans, to serious concerns regarding possible terrorist sabotage of the waste shipments, to fiscal concerns with continuing to burden the hardworking taxpayers of this nation with the ever-rising costs of this Department of Energy boondoggle.

At issue before the Subcommittee today are two topics: progress on the Yucca Mountain Project overall, and legislation aiming to dramatically alter the Nuclear Waste Trust Fund and take the Yucca Mountain project off-budget completely.

Regarding progress on the proposed nuclear waste repository overall, I hold the firm belief that forward progress on this project is impossible.

With every week that goes by and with every dollar spent in an attempt to make the Yucca Mountain waste repository feasible, additional flaws that should render the project unsuitable for licensing are exposed.

The scientific, public safety, health, and environmental concerns surrounding the proposed waste repository are well-documented and I will not spend my time here today reiterating them to the Subcommittee.

I am assured that you are all well aware of these issues and I would entreat you to take these concerns as seriously as do the Nevadans who will most likely affect be affected by this misguided policy.

However, I would like to take this opportunity to address a fairly immediate concern, one that is gaining more attention as the DOE works towards licensing the repository.

While the DOE continues to spend millions upon millions of dollars on the Yucca Mountain project—we have yet to begin to address the dangers the transportation of high-level nuclear waste poses to our national security and our citizens' health and safety.

The issue of transporting 77,000 metric tons of high level nuclear waste through thousands of American neighborhoods, across our nation's rugged terrain, and through our busy city scapes, past schools and hospitals, out to Yucca Mountain has raised the ire of Americans all across the country.

Truthfully, I have seen no evidence to prove that the deadliest material known to man can be safely and securely transported across the nation to Yucca Mountain.

Just one accident could result in the loss of thousands of lives and unimaginable devastation to communities and the environment.

And yet, even more worrisome than an accident is a malicious terrorist act to derail a shipment or worse—sabotage these shipments with an explosive device in order to create a dirty bomb.

This is an issue for all Americans nation-wide and it is up to Congress to oversee and scrutinize the Department of Energy's work in this which is, in my opinion, a flawed and potentially tragic scheme.

The second issue at hand before the Subcommittee today is consideration of two bills designed to alter the Nuclear Waste Trust Fund, H.R. 3429, and H.R. 3981.

As I have stated before, I strongly oppose any language that would eliminate Congressional oversight of the annual Yucca Mountain funding process, and both of these bills would have that effect.

H.R. 3981 and H.R. 3481 would both allow utility company contributions to be credited to the Nuclear Waste Fund as offsetting collections, thus severely limiting Congress' ability to oversee and manage how DOE spends these funds annually.

As my above statement outlines, I have serious concerns with the DOE's management of the Yucca Mountain Project, and annual Congressional oversight of the funding appropriated for this project is key in executing our duty of ensuring that every cent of American taxpayers' dollars is spent responsibly and efficiently.

Certainly, the unanswered scientific questions, public safety and health concerns, and unresolved issue of how the nuclear waste will be shipped across country to Yucca Mountain warrant further examination before Congress allows our oversight of this proposed repository to be rescinded.

At a time when Congress should be tightening its spending belt whenever and wherever possible, it would be ill-considered for us to allow funding to increase at an astronomical rate for a project that may very well be proven unfeasible before it is even licensed.

While I understand that Chairman Barton of the full Energy and Commerce Committee is the lead sponsor on H.R. 3981, I strongly encourage this Subcommittee not to move forward on these legislative proposals.

In conclusion, Congress must work to identify an alternative to the Yucca Mountain plan.

The idea of burying one of the most toxic substances known to man underground and isolating it for ten thousand years was devised nearly 20 years ago.

Over the past two decades, scientific advances have demonstrated that the geologic burial of nuclear waste is just that: a waste.

Congress cannot provide for the squandering of our nation's limited resources on a project that has been proven over and over again to be a disaster both scientifically and fiscally.

Congress should not and can not abdicate its oversight responsibility of a billion dollar project.

Such a decision would be a disservice to every taxpayer in America.

With that, I once again register my opposition to continuing along the disastrous path of burying our nation's nuclear waste in my Congressional District.

I offer my strongest support for working together towards an alternative solution to the geologic burial of high-level nuclear waste, and propose that Congress maintain its Constitutional authority over spending and the use of taxpayer dollars.

Mr. HALL. Thank you, and at this time we recognize Mrs. Berkley.

STATEMENT OF HON. SHELLY BERKLEY

Mrs. BERKLEY. I want to thank Chairman Hall and Ranking Member Boucher for allowing me to testify before you today. Yucca Mountain remains the single most important issue of concern to me and to my constituents.

Almost every week new information comes to light about the dangers of the Yucca Mountain project. Just to say a few. Nuke experts says Yucca Mountain unsafe. Federal officials, Yucca Mountain workers exposed to cancer-causing dust. Concerns about Yucca Mountain leaks echoed.

Yet the administration and the nuclear industry, in defiance of the well-founded fears of Nevada citizens, rushes recklessly ahead to build a high-level nuclear dump in Nevada. Since the horrific attacks of September 11 on our nation, we are living in a far more dangerous world, but the Department of Energy has neglected to conduct tests assessing the risks of potential terrorist attacks, not only on the Yucca Mountain project, but on the transportation routes.

The Department of Energy's nuclear programs have a singular record of ineptitude and indifference to the health and well-being of the general public and their own workers. Recently it was established that the DOE allowed thousands of miners, scientists, and technicians at the Yucca Mountain project to be exposed to the toxic dust silici, which has resulted in the cause of fatal illnesses of silicosis.

This negligent attitude toward the well-being of its own workers does not instill confidence in the Department of Energy's ability to protect Americans from the dangers of transporting high-level nuclear waste to Yucca Mountain.

This agency continues to tell us to trust them and that they know what they are doing. It is a line Nevadans, and the people

across the Nation, can no longer afford to buy. Nevada is not alone. Across the country, wherever DOE operates a nuclear facility, radioactive contamination has ravaged the environment and caused unacceptable risks to public health.

And I need only mention the name Savannah Ridge, Oakwood, and Rocky Flats, to emphasize what I am talking about. My constituents know first-hand the human toll taken by the Department of Energy nuclear projects in Nevada.

The cancer, the catastrophic lung diseases, the pain, the suffering, the deaths. They have too often heard and believed the DOE's assurances that its nuclear projects are entirely safe, only to later see their friends, neighbors, and loved ones sicken and die as a direct result of the DOE's activities.

Now there is an additional threat. I would like to draw your attention to the alarming terrorism and homeland security issues inherent in the Yucca Mountain project, issues that the Department of Energy has negligently refused to confront.

Despite spending over \$9 billion so far on the problem-ridden Yucca Mountain project, DOE has made no effort to seriously address the target rich environment that over 100,000 shipments of deadly nuclear waste would create.

Just 2 weeks ago, we witnessed the tragic terrorist attacks on the rail lines in Madrid, Spain, and just yesterday the danger of moving high level waste from existing storage facilities was underscored by the news from France that explosives were found planted under a rail bed.

Imagine what would have happened if these trains had been carrying high level radioactive waste. The threat of attack is real. With the deplorable record of the DOE in mind, and outstanding homeland security issues, I testify today in the strongest terms against the administration's proposal to sharply increase funding for the Yucca Mountain project, and to reject any proposal that would circumvent the appropriations process, tying the hands of leading Members of Congress.

In its latest budget the White House has proposed an unprecedented increase in funding for the Yucca Mountain project to \$880 million, despite multiple lawsuits challenging the site.

The Nuclear Waste Technical Review Board, not traditionally a friend to the State of Nevada's position, established recently that the storage canisters that the DOE says will keep radiation out of the environment will—and not may, but will—in fact corrode and release massive radioactive contamination.

It is unconscionable that this administration is requesting \$880 million for the construction of this repository while we are running \$551 billion deficits. Yet, they cannot give the State of Nevada \$5 million, only one-half of 1 percent of this budget request, for scientific oversight.

This is not the first time that Nevada has had to fight for oversight funding. Even though it is clearly stated in the Nuclear Waste Policy Act that Nevada must be given Federal funding to pay for oversight activities at Yucca Mountain, the State of Nevada has been denied adequate oversight funding again.

This past week the State of Nevada, frustrated by what has become an annual ritual, was forced to file suit to seek payment of

this oversight funding. Clearly the DOE does not want anyone looking over its shoulders, whether it is the State of Nevada exercising its legally required watchdog role, or Congress overseeing its budget.

The Department of Energy has continually failed to make safety and security a top priority, and instead remains focused on accelerating this ill-conceived project in order to meet some artificial 2010 deadline that was established years ago.

This project is unprecedented in its scope, and its potential harmful consequences for Nevadans and thousands of communities across our nation. It is important that we recognize this project as risky, and it should not be rushed, and should be scientifically sound to ensure the safety of our public.

I urge the members of this committee to reject any proposal that would skirt the appropriations process, and tie the hands of the Members of Congress. Funds for the Yucca Mountain project should have to be compete with our needs to expand clean energy sources and to break our dependence on foreign oil.

At a time when oil markets are volatile and the cost of gas has skyrocketing, our Nation must scrutinize every dollar spent on the Yucca Mountain project, and invest our resources to strengthen and diversify clean energy sources.

And I can tell you with assurance that should this project go forward, should we jeopardize the lives of millions of Americans on these transportation routes, to put nuclear waste in a hole in the middle of the Nevada desert, which will do nothing, nothing to help this Nation with its energy needs, I can assure you that the civil disobedience will be extraordinary.

There are thousands of Nevadans that have already pledged to lay across those railroad tracks to prevent future generations of Nevadans from being exposed to toxic radioactive waste, and I can assure you that I will be one of those thousands of Nevadans that are protecting my State, and thousands of generations of Nevadans to come.

I thank you very much for your kind attention, and I appreciate the opportunity to be here.

Mr. HALL. And we thank you for your able presentation.

We recognize Mr. Porter.

STATEMENT OF THE HON. JON C. PORTER

Mr. PORTER. Thank you, Mr. Chairman, for providing me the opportunity to testify today. As you know, the Yucca Mountain issue has for over two decades been a very intense personal issue for the citizens of the State of Nevada and they have consistently shown their opposition.

I understand the concerns of the utility companies and States with nuclear reactors, and many of my colleagues are feeling increasing pressure from the nuclear energy industry, and their constituencies to remedy the situation.

And I agree that they are in a difficult situation, and a difficult position. Unfortunately the answers coming out of past Congresses, and this one, do not provide the right solutions. They only serve to further intensify the problem.

Political expediency has prevailed over sound science and just common sense. As Nevadans have learned over the past 20 years, when an answer does not suit the Department of Energy or the nuclear industry, they simply change the question. When an earthquake hits just 8 miles from Yucca Mountain, the DOE tells us not to worry about it. The rock is solid. Don't worry about it, Nevada.

When one of their own scientists raises the possibility of water percolating up through the proposed repository level from the water table, his theories are dismissed. Mr. Chairman, instead of admitting their mistakes, successive administrations, both Republicans and Democrats, decided to continue dumping billions of dollars into studies to turn a molehill into a mountain recipient of nuclear waste.

To date our government has spent about \$9 billion on this fiasco. The nuclear industry is fond of pointing out how much money has been spent studying Yucca Mountain as if the amount already spent somehow justifies spending more, but has anyone said to you how much the site will cost from this point on?

It is estimated that the Yucca Mountain project will cost over and above the industry fees of \$60 billion. This body knows that it is not sunk costs that matter in decisionmaking. It is the future costs.

The nuclear industry is demanding that you and your constituents, the American taxpayer, flip the bill for an unnecessary, but more importantly, unsafe project. As a legislator, like all of you here today, I need to be fully informed about the effects of legislation and issues will have on my constituents.

As Members of Congress, we consistently seek evidence before rather than later when making decision. How can we be expected to do less now, yet that is exactly what the nuclear industry expects you to do.

They have once again come to Congress for help and asked you to eliminate congressional oversight of funding which has been paid by the American taxpayer. The bill before this committee, H.R. 3981, would effectively remove the Yucca Mountain project from Congress' budgetary authority and eliminate any congressional oversight of the project for future Congresses.

The passage of such legislation poses a great danger to my State, but to the Nation. Not just the State of Nevada, but the Nation on a physical level and on a symbolic level.

As you know the transport of nuclear waste to the Yucca Mountain site requires the greatest deal of oversight. For this reason, I, on behalf of the people of Nevada, insist that this body maintain its oversight authority over such potentially dangerous projects.

On a more abstract scale, I worry that such legislation will serve as a dangerous precedent of abdicating our Congressional authority over interstate commerce. Mr. Chairman and the committee, with all of the problems that have plagued the Yucca Mountain project since its inception, and the hundreds and hundreds of scientific questions still left unanswered, why would we even give such a budgetary gimmick a consideration; when now more than ever this project, the Federal agencies involved, and the people of Nevada, need the strong support of Congressional authority.

The American people deserve more from us than wasting our time throwing billions of dollars at an industry that has spent too long already at the public trough.

A couple of weeks ago, my colleagues and I, with the Railroad Subcommittee, held a hearing in Las Vegas to examine the Department of Energy's plan to ship nuclear wastes to the proposed Yucca Mountain repository.

Any assessment of Yucca Mountain's suitability as a national nuclear waste repository must look at the feasibility of transporting waste to that site. This is just not a Nevada issue. It is impacting every town in the country.

Taking 77,000 metric tons of dangerous radioactive nuclear waste, removing it from the reactor sites around the country, and putting it on trucks, trains, and barges, and moving it through cities, towns, and waterways across America is a dangerous scheme.

On September 11, we witnessed the single-most horrific event in our Nation's history. Instantly, we became all too aware of our country's vulnerability to threats from outside of our borders.

Even more recently the terrorist train bombing in Madrid, Spain, and yesterday the discovery of a bomb concealed under railroad tracks in France, have brought renewed attention to this very dangerous railroad processing and transportation system, and mass transit, face in our country post-9/11.

The idea of transporting tens of thousands of tons of nuclear waste across the country was not a good idea before September 11, and it is certainly not a good idea today.

We had never thought of a fully fueled passenger plane as a weapon.

Let us not make the same mistake with the trucks, the trains, and barges that will be transporting nuclear waste past Chicago, Toledo, Los Angeles, Dallas, Pittsburgh, and Denver, just to name a few.

At the end of the day, all Yucca Mountain will do is create one more large storage facility and millions of new security threats on every road, rail, and water mile this waste will travel along.

We were all elected and sent to Washington to represent millions of people around the country. These constituents have instilled their faith in each of us to make tough decisions to protect their interests and their hard earned tax dollars.

What interests are really being served here today, the health and public safety of our citizens, or the balance sheets of the nuclear utility companies?

Again, Mr. Chairman, thank you for allowing me to testify today. I, with my colleagues, Mrs. Berkley and Mr. Gibbons, along with our Senators, will continue to stand united and fight to protect our homes and our livelihoods from this ill thought-out scheme, and we believe the rest of the Nation should share that concern. Thank you.

[The prepared statement of Hon. Jon C. Porter follows:]

PREPARED STATEMENT OF HON. JON C. PORTER, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF NEVADA

Mr. Chairman, thank you for providing me the opportunity to testify today. As you know, the Yucca Mountain issue has for over two decades been of intense personal interest to Nevadans.

I understand the concerns of the utility companies and States with nuclear reactors. Many of my colleagues are feeling increasing pressure from the nuclear energy industry and their constituencies to remedy the situation. I agree that they are in a difficult position. Unfortunately, the answers coming out of past Congresses and this one do not provide the right solutions, and only serve to further intensify the problem. Political expediency has prevailed over sound science and common sense.

As Nevadans have learned over the past twenty years, when an answer does not suit the Department of Energy or the nuclear industry, they simply change the question. When an earthquake hits just eight miles from Yucca Mountain, the DOE tells us not to worry, the rock is so solid. When one of their own scientists raises the possibility of water percolating up through the proposed repository level from the water table, his theories are dismissed. When an analyst acknowledges the possibility of criticality, his theories are discredited. Instead of admitting their mistakes, successive Administrations, Republican and Democrat, decided to continue dumping billions of dollars into studies to turn a molehill into a mountain recipient of nuclear waste. To date, our government has spent about \$9 billion on this fiasco.

The nuclear industry is fond of pointing out how much money has been spent studying Yucca Mountain, as if the amount already spent somehow justifies spending more. But has anyone told you how much the site will cost from this point on? It is estimated the Yucca Mountain Project will cost over and above industry fees of \$60 billion. This body knows that it is not *sunk* costs that matter in decision making; it is *future* costs. The nuclear industry is demanding that you and your constituents, the American taxpayer, foot the bill for an unnecessary and unsafe project.

As a legislator, like all of you, I need to be fully informed about the effects legislation and issues will have on my constituents. As Members of Congress, we consistently seek evidence *before* rather than later, when making decisions. How can we be expected to do less now?? Yet, that is exactly what the nuclear industry expects you to do. They have once again come to Congress for help and asked you to eliminate congressional oversight of funding which has been paid by the American taxpayer.

The bill before this Committee, H.R. 3981 would effectively remove the Yucca Mountain Project from Congress' budgetary authority and eliminate any congressional oversight of the Project for future Congresses. The passage of such legislation poses a great danger to my state and the nation on a physical level and on a symbolic level. As you know, the transport of nuclear waste to the Yucca Mountain site requires the greatest deal of oversight. For this reason, I, on behalf of the people of Nevada, insist that this body maintain its oversight authority over such potentially dangerous projects. On a more abstract scale, I worry that such legislation will serve as a dangerous precedent of abdicating our Congressional authority over Interstate Commerce.

With all the problems that have plagued the Yucca Mountain Project since its inception and the hundreds of scientific questions still left unanswered, why would we even give such a budgetary gimmick consideration, when now more than ever, this Project, the federal agencies involved, and the people of Nevada need the strong support of Congressional authority. The American people deserve more from us than wasting our time throwing billions of dollars at an industry that has spent too long already at the public trough.

A couple of weeks ago, I held a hearing in Las Vegas to examine the Department of Energy's plan to ship nuclear waste to the proposed Yucca Mountain repository. Any assessment of Yucca Mountain's suitability as the national nuclear waste repository must look at the feasibility of transporting waste to the site. Taking 77,000 metric tons of dangerous radioactive nuclear waste, removing it from reactor sites around the country, and putting it on trucks, trains and barges, and moving it through cities, towns and waterways across America is a disastrous scheme.

On September 11th, we witnessed the single-most horrific event in our nation's history. Instantly we became all too aware of our country's vulnerability to threats from outside our borders. Even more recently, the terrorist train bombings in Madrid, Spain, and the discovery of a bomb concealed under railroad tracks in France have brought renewed attention to the very danger railroads and mass transit face in our country in a post-9/11 world. The idea of transporting tens of thousands of tons of nuclear waste across the country was not a good idea before September 11th, and it's certainly not a good idea now. We had never thought of a fully fueled passenger plane as a weapon. Let's not make the same mistake with the trucks, trains, and barges that will be transporting nuclear waste past Chicago, Toledo, Los Angeles, Dallas, Pittsburg, and Denver. Just to name a few.

At the end of the day, all Yucca Mountain will do is create one more large storage facility and millions of new security threats, one for every road, rail, and water mile

this waste will travel along. We were all elected and sent to Washington to represent millions of people around the country. These constituents have instilled their faith in each of us to make tough decisions to protect their interests and their hard earned tax dollars. What interests are really being served here today, the health and public safety of our citizens or the balance sheets of the nuclear utility companies?

Again, thank you Mr. Chairman for the opportunity to testify today. We in Nevada, Mr. Gibbons and Mrs. Berkley, along with our Senators, will continue to stand united and fight to protect our homes and our livelihoods from this ill thought-out scheme.

Mr. HALL. I thank you, and I assure you that every member of this subcommittee, and I think every member of this Congress, recognizes how capable, and how determined, and how sincere you are. If I were in your State, I would be sitting by your side, and I admire you for what you are doing.

If either of you other two have thought of something that you didn't think of when you were testifying and you want to add to it, we recognize you at this time. If not—

Mrs. BERKLEY. I do.

Mr. HALL. All right. I never saw you when you did not have something to say.

Mrs. BERKLEY. My husband says I always have to get the last word in.

Mr. HALL. And it will be worthwhile.

Mrs. BERKLEY. Thank you very much. I was going to ask for an extra minutes, and I would appreciate your courtesy. I think it is important—I mean, we live with this stuff. I mean, 83 percent of the people we represent in the State of Nevada collectively are opposed to this program, and you will see that Republicans and Democrats alike for the last 20 years that have represented the State of Nevada have taken a strong stand against this Yucca Mountain project.

But I think it is important to just briefly go over the history. The reason that Yucca Mountain was originally selected is because it was supposed to be a natural geologic barrier. The mountain was supposed to collapse on top of the nuclear waste, and encase it for hundreds of thousands of years.

That turned out not to be the case. Then they realized that they had to come up with—had to invent canisters that could contain the waste that could go into Yucca Mountain. Now we know that there is no canister in existence that would not corrode, and we just got that word in the last month-and-a-half.

So then they came up with an additional idea that they are going to put the nuclear waste in the mountain, covered by a canister, and then covered over by a titanium shield. There is no way to safely store nuclear waste anywhere, let alone Yucca Mountain, with the ground water problems, the seismic activity, and volcanic activity that exists.

Now, I read something in our papers today regarding one of our colleagues who in my opinion insulted the State of Nevada and our people, and said that it is time that they just roll over and let us do this project.

This is not an ill-founded concern that Nevadans have, and let me just remind all of you that Nevada has done its duty. We had the atomic testing at the Nevada Test Site in the 1950's and the 1960's, where the precursor of the Department of Energy told Ne-

vadans that it was perfectly safe to resume these above-ground tests.

All you had to do is take a shower and there would be no danger of radioactivity or radioactive contamination. Well, let me tell you. About 2 years ago when I met with the Nevada test site workers from the 1950's and the 1960's, and one of the questions—and there are about 200 people in this room.

I was just an observer at this hearing. And the moderator said will all of you who were workers in the 1950's and 1960's at the Nevada Test Site, who are suffering from some form of cancer, please stand up.

Every single person in that room stood up. All 200 of the workers that showed up, and that are able, as many are dead now.

Nobody can apologize to the State of Nevada 100 years from now when those canisters start leaking, and we can all have the best of intentions sitting here.

But which one of us will be here 100 years from now to apologize to the people of Nevada when their ground water is contaminated, and when the environment is devastated, when people are dying because of radioactive poisoning, and Las Vegas is a ghost town.

Not one of us can make that assurance and until we can, we should not go forward with this program. There are alternatives, alternatives to Yucca Mountain that are less expensive, less dangerous, and that we should be exploring as a civilized Nation, and as an intelligent group of people. Thank you very much, Mr. Chairman.

Mr. HALL. We thank you. Your title is United States Representatives, and you represent us well. I have no questions. I think the ranking member has no questions. Does any member of the committee have any questions or any statements that they want to make? If not—yes, Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman. If I could add a very brief comment.

Mr. HALL. All right, sir.

Mr. PORTER. Again, for 20 years Nevada has been fighting this, and I realize that it appears at times that it is not in my backyard argument. Our hearing in Las Vegas a few weeks ago, a Rail Subcommittee, was very telling.

And as Nevada has been crying foul as we should, I really think the fact of the transportation through other communities has been discounted in this debate. If it is on trucks, it is going to be hauled on trucks 220 feet long, with 6 or 7 shipments a day through many of these communities across the country just like Nevada.

So I guess as we testify today and talk about Nevada's concerns, we are concerned for the Nation also. That these transportation routes, whether they be by rail, by truck, they will be passing your schools, your churches, your shopping centers, and your homes, just as it will be in Nevada.

If it is on rail, it may be next to produce. It may be next to chickens, or cars on a rail car traveling through your community. So again we say thank you very much, but please consider the impacts on your own communities as you make a decision. Thank you.

Mr. HALL. Thank you.

Mr. NORWOOD. Mr. Chairman, can I ask a question of counsel?

Mr. HALL. I recognize you for 5 minutes.

Mr. NORWOOD. I don't need 5 minutes. I just need an explanation. How long in this country have we been transporting nuclear waste?

Mr. HALL. The best estimate we have is about 40 years.

Mr. NORWOOD. Has there ever been an incident, one incident, of a disaster by nuclear waste being transported?

Mr. HALL. The Chair is not advised.

Mr. NORWOOD. Counsel.

Mr. HALL. We will have witnesses who can answer that on the second and third panels.

Mr. NORWOOD. To my knowledge, there has not been one, but we will ask the experts when they come. Thank you.

Mr. HALL. I knew you knew the answer before you asked the question.

Mr. PORTER. Mr. Chairman, can I respond? I mean—

Mr. HALL. The Chair recognizes the gentleman.

Mr. PORTER. Thank you, Mr. Chairman. As we talk about the tragedy of 9/11, we have not had an airplane used as a weapon in this country prior to 9/11. What we are saying is let us not allow our train systems to be used as a weapon also and we can't do business as usual in this country.

And I appreciate that we may not have had a major catastrophe. There has been problems with casks leaking today on our highways, but please, as we look forward to the future, it is not about yesterday. It is about tomorrow.

And we have experienced things in this country unlike we have ever seen before. Thank you.

Mr. HALL. Mr. Gibbons, do you have any closing statement?

Mr. GIBBONS. Well, I was not going to add anything, but I feel compelled to do it now. Mr. Chairman, we are continuing a blind process. The process started in the 1970's that said we will have no other course before us but cheap, inexpensive, geologic burial of this material.

Since that time, a quarter of a century later, technology has proven that this is an unneeded and unnecessary continued process. There are alternatives, and after all, we are here to make the wisest decisions today. Not continue the decisions of 1970 and 1980.

If we make the wisest decision of today in the 21st century looking at technology, there are alternative fuels that are being developed that produce less waste. There is reprocessing that should be considered.

And 95 percent of the energy in each one of these rods will remain in this rod when it is buried. We need to start thinking of alternatives and technology is providing us with new innovative, creative answers to the waste problems, such as transmutation, et cetera.

If we start investing in those processes, we do not need to ship this material across our Nation. We can handle the waste onsite, reduce the few waste-generating capacities of these systems.

It is not one where we need to be blindly going down a path where we have been going down for 20 years if we do it right, and if we make the right decisions, this committee, this Congress,

should take the right steps and move forward with a vision for how to properly solve this problem, rather than simply following a blind path of geologic burial.

Mr. HALL. We have heard from the three of you, and——

Mrs. BERKLEY. Could I answer Mr. Norwood's question? It will just take a second. But he asked a question and he is entitled to answer.

Mr. HALL. Go ahead.

Mrs. BERKLEY. Mr. Norwood, according to the Department of Energy's own environmental impact statement, with over a 130,000 estimated shipments over a 38 year period, there will be statistically speaking a minimum of 300 accidents, and that is DOE's own estimate.

Mr. MARKEY. Mr. Chairman.

Mr. HALL. Yes, the Chair recognizes the gentleman from Massachusetts.

Mr. MARKEY. May I ask a round of questions?

Mr. HALL. We are not open to questions at this time.

Mr. MARKEY. Oh, you are not?

Mr. HALL. No.

Mr. MARKEY. Well, how can I be——

Mr. HALL. Are you asking for unanimous consent? Do you want to ask for unanimous consent?

Mr. MARKEY. Can I ask for unanimous consent?

Mr. HALL. I object to it. Is that clear?

Mr. MARKEY. What?

Mr. HALL. Does that satisfy your question?

Mr. MARKEY. What is that?

Mr. HALL. You asked for unanimous consent, and there is objection.

Mr. MARKEY. No, I mean—well, what motion did Mr. Norwood make? That is the only motion that I want to make.

Mr. HALL. He asked for unanimous consent for something and it was granted.

Mr. MARKEY. May I ask unanimous consent to proceed out of order?

Mr. HALL. All right. The gentleman has asked for unanimous consent to proceed out of order. Is there objection? The Chair recognizes you for 3 minutes.

Mr. MARKEY. I thank you very much, Mr. Chairman, and it is only just to interject and compliment the panel for their excellent testimony. And to remind people that North Carolina was originally on the list of States that was going to be considered.

But Jim Broyhill was the ranking Republican on this committee, and he insisted that it be taken off the list. And Louisiana was originally on the list, but Bennett Johnson insisted that it be taken off the list.

And New Hampshire was originally on the list, but John Sinunu insisted that it be taken off the list. And Washington State was on the list, and Tom Foley insisted that it be taken off the list.

And Texas was on the list, and Jim Wright insisted that it be taken off the list. And there must be a reason why all of those very powerful Congressmen and Senators insisted that it be taken off the list.

And there is a concept in the law called *res ipsa loquitur*; the thing speaks for itself. But none of these people wanted all this nuclear waste traveling through their States on trains like a mobile-Chernobyl.

And all you really have to know is that it is some of the most powerful, influential and respected Members of Congress used their power to make sure that their States would not be targeted, and you are doing an excellent job in representing your State, and making that point to this committee. Thank you, Mr. Chairman.

By the way, Mr. Chairman, you look very comfortable on that side of the aisle. I just want to tell you that you look very, very comfortable over there.

Mr. HALL. Do you yield back your time now, please?

Mr. MARKEY. Yes, thank you.

Mr. HALL. All right. We want to thank this panel and appreciate you very much. All right. We are ready for opening statements for those who want to make them. What is the pleasure of the ranking member?

Mr. BOUCHER. Yes, I have a brief statement.

Mr. HALL. All right. You have a brief statement and I will make a brief opening statement. I recognize myself for 3 minutes, and I want to thank Rick Boucher and Chairman Barton, and Ranking Member Dingell of the full committee for their help setting up this hearing.

Neither this hearing, nor our interests in Yucca Mountain, are partisan, and on May 8, 2002 the House voted 306 to 117 to override the objection of the Nevada Governor and approve the Yucca Mountain site for development as a long term depository for high level nuclear waste.

The Senate passed it on a voice vote and the President signed it into law. Yucca Mountain clearly has the bipartisan support of a strong majority of this subcommittee, this committee, this House, and this Congress.

So we meet today to discuss the next step in the Yucca Mountain project, and to review legislation to make the Nuclear Waste Fund more available to pay for this important project. The Department of Energy is working with the contractor on a license application to the Nuclear Regulatory Commission.

DOE has said publicly and consistently that it will complete the license application in December 2004, and open Yucca Mountain in 2010. We have before us today Under Secretary Bob Card, and the Director of the Office of Civilian Radioactive Waste Management of the Department of Energy, Margaret Chu. Her office will be managing the license application process.

We also have before us the Chairman of the Nuclear Regulatory Commission, Nils Diaz. The NRC is responsible for reviewing and approving the license application, and is said to be working with DOE on an ongoing basis to explain what the NRC requires.

Additionally, we have on the last panel the President and General Manager of Bechtel, Mr. John Mitchell. His company, hired by DOE as the contractor on the Yucca Mountain project is conducting much of the work.

In addition to the legislative nature of this hearing, members should take this opportunity to learn about the progress of Yucca

Mountain, how the work site is going, and will Bechtel and DOE complete the license application on time.

Is the NRC providing the assistance that Bechtel and DOE needs. If the license application deadline is missed will the project open in 2010. Will the delay cost utilities and consumers more money in fuel storage costs.

We will review two bills, H.R. 3429, and H.R. 3981, both of which seek to reclassify fees paid into the Nuclear Waste Fund as, quote, offsetting the collections. For too long the Nuclear Waste Fund expenditures have competed with other discretionary programs, and it is high time to make these funds more readily available to pay for what they were intended to pay for, the development of a geologic repository for radioactive waste.

The American consumers have contributed almost \$23 billion into the Nuclear Waste Trust Fund. Yet, these dedicated monies can at times be difficult for the project to tap because of the unfortunate budget rules and politics in the appropriations process.

This subcommittee does not write appropriations bills, nor does it write budget legislation, but we do understand energy policy and the importance of fully funding this commitment of Congress, and this important part of the Nuclear Waste Policy Act.

Witnesses today representing the State regulators and the nuclear energy industry can address the importance of funding Yucca Mountain at appropriate levels. Approximately 45,000 metric tons of spent nuclear fuel from past and ongoing commercial nuclear power operations is currently stored at 77 sites throughout the country.

The General Accounting Office recently completed a study and continuing study indicating that our spent fuel would be more secure in one secure place compared to being spread throughout the country.

No one is saying that the current situation is unsafe, but it is also clear that opening Yucca Mountain will improve our national security. Congress passed the Nuclear Waste Policy Act of 1982, and in 1987, Congress selected the Yucca Mountain site in Nevada as a single site to be characterized by DOE for long term geologic disposal of the Nation's high level radioactive waste inventories.

We are well into the third decade of work on a nuclear waste repository. The progress has been good, but we have already been hit with operation delays. It is time to make sure that the Federal authorities are doing their job responsibly, make sure that this project is funded appropriately, and do whatever needs to be done to satisfy the two decade old vision of storing our high level waste in a repository.

Finally, I am pleased to welcome members of the Nevada House delegation today, and I was pleased to have them here. They did their job well, and they were true to their representation. Their voices are welcome today as we discuss the status of this nationally important project.

[The prepared statement of Hon. Ralph Hall follows:]

PREPARED STATEMENT OF HON. RALPH HALL, CHAIRMAN, SUBCOMMITTEE ON ENERGY AND AIR QUALITY

I want to thank Ranking Member Rick Boucher, and Chairman Barton and Ranking Member Dingell of the full committee, for their help on the hearing. This is my

first hearing as the Chairman of this subcommittee, and I am pleased that we can come together in a bipartisan spirit on this topic.

On May 8, 2002, the House voted 306 to 117 to approve the Yucca Mountain site for development as a long-term depository for high-level nuclear waste. The Senate passed it on a voice vote, and the President signed it into law. Yucca Mountain clearly has the bipartisan support of a strong majority of this Subcommittee, this Committee, this House, and this Congress.

We meet today to discuss the next step in the Yucca Mountain project, and to review legislation to make the Nuclear Waste Fund more available to pay for this important project. The Department of Energy (DOE) is working with its contractor, Bechtel, on a license application to the Nuclear Regulatory Commission (NRC). DOE has said publicly and consistently that it will complete the license application in December 2004, and open Yucca Mountain in 2010.

Today, Undersecretary Bob Card, and the Director of the Office of Civilian Radioactive Waste of the Department of Energy (DOE), Margaret Chu, have joined us. Her office will be managing the license application process. Also joining us is the Chairman of the Nuclear Regulatory Commission (NRC), Nils Diaz. It is my understanding that the NRC and the DOE are working together on an ongoing basis to review and approve the license application. Additionally, we have on the last panel the President and General Manager of Bechtel, Mr. John Mitchell. The DOE hired his company as a contractor on the Yucca Mountain project to conduct much of the work.

In addition to the legislative nature of this hearing, Members should take this opportunity to learn about the progress at Yucca Mountain.

- How is work at the site going?
- Will Bechtel and DOE complete the license application on time?
- Is the NRC providing the assistance that Bechtel and DOE need?
- If the license application deadline is missed, will the project open in 2010?
- Will a delay cost utilities and consumers more money in fuel storage costs?

We will review two bills, HR 3429 and HR 3981, both of which seek to reclassify fees paid into the Nuclear Waste Fund as “offsetting collections.” For too long, Nuclear Waste Fund expenditures have competed with other discretionary programs, and it is time to make these funds more readily available to pay for what they were intended—the development of a geologic repository for radioactive waste.

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Witnesses today representing state regulators and the nuclear energy industry can address the importance of funding Yucca Mountain at appropriate levels.

Approximately 45,000 metric tons of spent nuclear fuel from past and ongoing commercial nuclear power operations is currently stored at 77 sites throughout the country. The General Accounting Office (GAO) recently completed a study indicating that our spent fuel would be more secure in one location, rather than spread throughout the country. While the current situation is safe, it is clear that opening Yucca Mountain will improve our national security.

Congress passed the Nuclear Waste Policy Act (NWPA) of 1982. In 1987, Congress selected the Yucca Mountain site in Nevada as the single site to be characterized by DOE for long-term geologic disposal of the nation’s high-level radioactive waste inventories. We are well into the third decade of work on a nuclear waste repository. The progress has been good, but we have already been hit with delays. It is time to make sure the Federal authorities are doing their job responsibly, make sure this project is funded appropriately, and do what needs to be done to satisfy the two-decades-old vision of storing our high-level waste in a repository.

I am pleased to welcome Members of the Nevada House Delegation today. We welcome their input as we discuss the status of this nationally important project.

Mr. HALL. At this time, I recognize the gentleman from Virginia, Mr. Boucher, for an opening statement.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman. I want to begin my comments this morning by welcoming you back to the subcommittee in your new capacity as Chairman, and let me say while we will miss you on our side of the aisle.

I have always over the years very much enjoyed my work with you, and I very much look forward to a continuation of our work together as you assume these new responsibilities.

I also appreciate the Chairman convening this morning's hearing on the subject of the status of the Yucca Mountain waste repository program, and our legislative proposals to modify the program's funding.

The Nuclear Waste Policy Act of 1982 gives the Federal Government the responsibility for providing a facility for the permanent disposal of nuclear waste. As stipulated by the Act, nuclear generators of electricity are responsible for the costs of both disposal and interim storage at utility reactor sites around the Nation.

The funding for the storage and disposal of nuclear waste is provided by an assessment that is charged to customers who receive electricity generated by nuclear power. Those fees are collected and placed in the Nuclear Waste Fund and are administered by the Department of Energy.

The Act also provided that the money would be held in the fund until needed to support peak spending years during the license application process, and during construction of the permanent repository, and during the placement of waste for permanent storage in the repository in all three of those phases.

Those phases are beginning now, with the license application expected to be filed for the repository during the course of this calendar year. Approximately \$9 billion has been expended on the program to date, and approximately \$14 billion remains in the fund.

But the current balance in the fund has been used historically for purposes other than advancing the goals of this program, and the program must now compete for funding with other unrelated programs at the Department of Energy.

The fund needs to be legislatively altered in order to ensure that the rate payer contributions are going for the purpose for which these contributions were intended and that the Yucca Mountain project receives the funding that it needs in order to move forward as outlined in the current schedule.

Our witnesses today will comment on two of the proposals that have been set forth to address this concern. One by our colleagues, Mr. Shimkus, and Mr. Rush, and the other introduced by Chairman Barton at the request of the administration.

Both of these legislative proposals would serve to ensure prospectively that the money collected from utility customers for the Nuclear Waste Fund is used for the purpose for which it is intended.

And I strongly support a policy change that would ensure the dedication of future collections to the furtherance of the Yucca Mountain program. But let me also say that I am interested in making sure that the funds currently on deposit, the \$14 billion presently retained within the Nuclear Waste Fund, will also be dedicated toward the purpose of advancing the goals of this program.

And so I think a very appropriate subject of our inquiry to the witnesses who will appear here today should be whether or not we are being sufficiently ambitious in simply addressing the funds pro-

spectively, and making sure that they are dedicated toward appropriate purposes.

I think that we also need to be asking about what we should be doing with regard to the \$14 billion currently on deposit, for which there is no, in my view, sufficient safeguard and assurance that those funds will also be directed toward the proper purposes of this fund, and that will be an area of focus for our questions this morning.

I very much look forward to hearing from our witnesses. I thank each of them for taking the time to share their views with us today, and Mr. Chairman, with that, I yield back.

Mr. HALL. I thank the gentleman. At this time, the Chair recognizes Mr. Norwood for 3 minutes. You have used 45 seconds and the Chair will yield you 1 of his minutes. You have the full 3 minutes, and we recognize the gentleman.

Mr. NORWOOD. Well, Mr. Chairman, first let me ask for unanimous consent and request that only you and the ranking member make opening statements so we can move right to the witnesses.

Mr. BOUCHER. Mr. Chairman, I am going to object.

Mr. MARKEY. Objection.

Mr. HALL. There is objection. Go ahead, Mr. Norwood.

Mr. NORWOOD. Thank you, Mr. Chairman, I appreciate the opportunity to be here today and let me start by commending you for holding this hearing, and I thank you for your leadership on this very important issue.

And I don't know how others feel about it, but I am very comfortable with you being in that chair and being on this side of the aisle, and I think probably you are, too. Now, I believe that Yucca Mountain and its selection as a permanent waste repository for this country's spent nuclear fuel was probably one of the real important decisions that we made in the 107th Congress.

I am greatly looking forward to hearing the Department of Energy's progress in pursuing the license application for Yucca Mountain construction, and authorization license from the Nuclear Regulatory Commission today.

The United States has over 45,000 metric tons of spent nuclear fuel scattered across some 70 sites in this country, and as a result of past and ongoing commercial nuclear power plants alone.

An additional 2,000 metric tons of spent nuclear fuel is generated by the operation of nuclear waste plants each year. By 2010 the total amount of commercial spent nuclear fuel is expected to reach approximately 60,000 metric tons.

Now, Mr. Chairman, this issue may not be on the radar screen of every American citizen, but let me assure you that it is very important to a great many of my constituents, particularly those who live in the Augusta area, and work at the DOE Savannah River site just across the river in Aiken, South Carolina.

In addition, Yucca Mountain is important to the folks who live within my district in Burt County, Georgia, which is the home of Plant Vogel operated by Georgia Power, which includes two separate reactors of approximately 1,200 megawatts each.

The Department of Energy has estimated that roughly \$7 million has already been spent on characterization and development activities at Yucca Mountain, with much of this money coming from fees

collected from currently operating commercial reactors paid into the Nuclear Waste Fund.

Georgia rate payers along have contributed over \$460 million to this project. It is critical that DOE submit their license application to the NRC by December 2004 for the sake of saving Federal dollars.

Each year the 2010 operations date is pushed back, an additional \$500 million in Federal costs will be added to the project for each year. So let me just echo that I am very much looking forward to our witnesses' testimony today, and I am anxious to hear of the DOE's progress.

I would like to make just one final note about the two pieces of legislation that we are discussing today, H.R. 3429 introduced by my friend from Illinois, Mr. Shimkus, and H.R. 3981, sponsored by the distinguished Chairman, Mr. Barton.

The intent of both of these bills is to create a direct link between funds coming from—

Mr. MARKEY. Mr. Chairman.

Mr. HALL. The gentleman from Boston.

Mr. MARKEY. I make unanimous consent that the gentleman from North Carolina be given 1 additional minute to finish his statement.

Mr. NORWOOD. Mr. Chairman, since the gentleman is not here from North Carolina, I don't—

Mr. MARKEY. I'm sorry, from Georgia.

Mr. HALL. Hearing no objection so ordered.

Mr. NORWOOD. Let me just conclude, and I will submit for the record, but simply to say that it was interesting to me in the first testimony that you can characterize Federal representatives on this issue of Yucca Mountain in many ways, but recklessly is not one of the ways you can characterize them. We have not rushed into this issue, and it is time to complete it. Thank you, Mr. Chairman.

Mr. HALL. The Chairman recognizes Mr. Markey, and you have no time left, Mr. Markey, but since I sat by you for 24 years, I will give you 3 minutes of my time.

Mr. MARKEY. I thank the gentleman. On June 26, 1995, men in moon suits descended upon Golf Manor, a subdivision of Commerce Township, Michigan. They dismantled David Hahn's back yard shed with electric saws and stuffed all the pieces into large steel drums marked radioactive.

It turned out that David Hahn, who was an avid Boy Scout, earned his atomic energy merit badge by building a model nuclear reactor, and then decided to earn Eagle Scout status by building a real live breeder reactor in his back yard.

The EPA later estimated that his efforts had placed 40,000 people at risk of radiation exposure. David was an enterprising boy, and this is 1995, and he had lots of help from the Nuclear Regulatory Commission.

He requested and obtained information from the NRC on how to isolate radioactive elements, and was told how to go about getting isotopes that could sustain a chain reaction when bombarded with neutrons.

He was told by the NRC that the health dangers of having some of these isotopes was very slight because if he possessed ample quantities of these materials that he would need an NRC license.

So he didn't worry when he began finding large quantities of radium contained in clocks at antique stores. He was told by the NRC that nothing produces neutrons as well as beryllium, and so he had a friend steal some from school.

The NRC sent him pricing data and commercial sources for some of the radioactive materials that he needed for his efforts, including a company in Czechoslovakia. It turned out that David's backyard experiment became a radioactive Superfund site that cost \$60,000 to clean up. He did, however, make Eagle Scout.

These days the Department of Energy is their very own radioactive Boy Scout, and is trying to earn its own Atomic Energy Merit Badge by designing a repository that can keep millions of tons of high level radioactive waste safe for thousands of years.

If they can do this safely, then the Department would truly earn Eagle Scout status, but as we know many Boy Scouts do not always live up to the Scout's motto of Be Prepared. That is why they require adult supervision.

And in this case adult supervision is supposed to be provided by our Nation's Nuclear Safety Regulator, the Nuclear Regulatory Commission. Today, I will be anxious to hear from our witnesses about the latest delays, security risks, lawsuits, and whistle-blower cases that have occurred since we last heard from them.

I have numerous questions that need to be answered before Eagle Scout status can be achieved. Will Yucca Mountain turn into a backyard shed Superfund site like David Hahn's little project and require billions of clean up dollars?

Will the DOE ever provide responses to the hundreds of unanswered technical questions required to license this facility? If not, will the NRC grant the license anyway? Will the NRC increase the security requirements for transporting all that waste across the country by rail, especially now that the tragedy in Spain has alerted us to how vulnerable the rail system really is?

Will it ensure that we don't have hundreds of mobile-Chernobyls riding across our country, and will Congress decide to take the waste fund off budget, ranking it above Homeland Security, defense spending and countless other priorities in importance?

The answers to these questions should help the subcommittee get a sense of whether DOE has a chance to make Eagle Scout, or be sent back to Tenderfoot. Thank you, Mr. Chairman, very much.

Mr. HALL. The gentleman yields back his time. I was never an Eagle Scout. I was a permanent Tenderfoot. I remember part of that obligation was to tell the truth. Is there anyone else who wants to be recognized?

Mr. SHIMKUS. Mr. Chairman.

Mr. HALL. Mr. Shimkus is recognized for 3 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman, and I will try to cut down my remarks, but I will tell my friend, Mr. Markey, who is a good colleague and friend, and I always enjoy a serious debate, that Yucca Mountain is not a suburb of Boston.

And it is a mountain depository under the mountain in the desert, which if you are going to have a waste site, that is probably

the best place in the world that it could ever be. And we have gone through this debate, and so this debate is not about society. This debate is about the funding.

And the reality is that it is really a budgetary debate. Truth in budgeting. If you are going to consume or ask for \$23 billion from an industry to develop a waste depository site, truth in budgeting would say that money goes there.

Now, if there are delays, and if there are concerns, if there are problems, I think that my questions will be to DOE as if we had an adequately funded program based upon the fund itself, would this be expedited.

I think the answer is pretty clear. I think that the answer would be yes. So I know that I missed my colleague from the State, and I know that I was casually referenced for those that have been following this issue.

It was a great debate and hopefully a final resolution, and now the issue is to move this project forward because of the promise that we have made to the Nation for decades. So I look forward to this debate.

It is very, very important for our oversight and the funding. And with that, Mr. Chairman, thank you, and I yield back my time.

Mr. HALL. Are there other opening statements? All right. I would like to ask unanimous consent for 1 week following the hearing all statements submitted by members be made part of the hearing record. Without objection.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. JOE BARTON, CHAIRMAN, COMMITTEE ON ENERGY
AND COMMERCE

Mr. Chairman, thank you for holding this important hearing. In my opinion, the development of a centralized and permanent geologic disposal site at Yucca Mountain is one of the most important public health and safety issues for the nation.

In the 107th Congress, I was pleased to help lead the bipartisan effort in this Committee, and on the floor of the House, to pass House Joint Resolution 87—the Yucca Mountain siting resolution. We won with an overwhelming bipartisan vote of 306-117. I attribute the strong support for the Yucca Mountain resolution to the common sense, pro-environmental aspects of the bill.

The vote in favor of Yucca was lopsided because the nation will not tolerate high-level nuclear wastes that are spread out at 77 sites in more than 30 states in every region of the country. Every one of these waste sites shares one common aspect: They were all designed for temporary storage of these dangerous wastes—not long-term disposal.

So for the sake of long-term public health and safety, and our national security interests, it is absolutely critical that we move to develop a single nuclear waste repository at Yucca Mountain.

However, we are not quite there yet. In fact, we are just getting started. DOE and its Yucca Mountain site contractor, Bechtel Corporation, must complete and submit a license application to the Nuclear Regulatory Commission by December 2004. There are only nine months left before we reach this deadline. If this deadline is missed by one year, the nation could incur additional costs of \$500 million to build Yucca Mountain.

Over the years I have developed a degree of apprehension about DOE's ability to complete major projects on time. The Oversight and Investigations Subcommittee has revealed many of DOE's troubled projects. I want Yucca to be a success story, and that is why I think this hearing is so important.

Congress must also do its part, and provide DOE with the requested appropriations to get the job done. I was happy to introduce H.R. 3981 last week, at the request of the Administration, to help solve the funding problem. The Nuclear Waste Fund has been cannibalized over the years to pay for unrelated Federal programs at the expense of the consumers who pay into the fund. The Federal government is required by law to develop a central repository, and the nuclear waste fund was

created for the sole purpose of paying for radioactive waste disposal. The fees paid into the nuclear waste fund must be freed up to cover these obligations.

The Nuclear Waste Trust Fund has more than \$14 billion in reserves, and receives about \$750 million in additional fees each year. I am willing to do all I can in to make sure these funds go toward their intended purpose. Thank you, Mr. Chairman.

PREPARED STATEMENT OF HON. TOM ALLEN, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF MAINE

The situation in Maine

The rocky Maine coast inspired the great artwork of Winslow Homer and has filled fish markets and lobster shacks for centuries. But along Montsweag Bay, at the end of a rocky peninsula, stands a dry cask spent nuclear fuel storage facility left over from the Maine Yankee Nuclear Plant, which closed in 1997. While the decommissioning plant will soon be nothing but a parking lot, its spent fuel sits there waiting for the Department of Energy to pick it up.

Maine Yankee no longer exists, but the community of Wiscasset cannot redevelop its shoreline, cannot entice businesses, and cannot open the peninsula for public use. In effect, the community is held hostage by this spent fuel. I am happy that we are having a hearing on the progress at Yucca Mountain, because it is important to the people of Maine that the United States create a safe, permanent facility to store spent nuclear fuel.

Mainers have contributed to the funding of a Repository

The people of New England have contributed over \$1.6 billion to the Nuclear Waste Fund set up to fund a permanent nuclear waste facility. Currently, more than \$14 billion sits in this fund, and yet Congress still is unwilling to allocate more money to the Yucca project than the fund collects in any given year. We need to give the Yucca Mountain project the resources to finish by 2010.

The Department of Energy will testify that they cannot complete the Yucca Mountain facility by 2010 unless they receive more funding, so I am interested to hear what witnesses have to say about various funding mechanisms. In particular, I would like to know whether our panel today supports the legislation introduced by Reps. Shimkus-Rush that attempts to direct the Nuclear Waste Fund's annual income directly to the Yucca Mountain Program's annual appropriation.

I support appropriating the necessary funding to complete Yucca on schedule, and I hope our witnesses will advise this subcommittee on the most effective path towards that goal.

We need to begin developing a plan to move the fuel.

But funding the Yucca Mountain program will not get spent fuel off the coast of Maine unless the Department of Energy begins planning to move the fuel.

In 1982 Congress committed to start picking up spent fuel by 1998, but none has been picked up to date. In fact, DOE has not even developed the necessary plans and facilities to begin picking up fuel in 2010 when Yucca Mountain is scheduled to open.

Moving all of the Nation's spent fuel is a major task, and DOE needs to begin preparing for this project now. Last year nine of my New England colleagues and I requested that more funds from the Nuclear Waste Fund be directed towards building the transportation-related systems and infrastructure necessary to remove spent fuel. The Department must demonstrate its ability to move spent fuel safely before it begins full-scale shipping in 2010. Maine has fuel ready and waiting to be shipped, as do other communities with decommissioned plants. Why, I wonder, doesn't DOE get this process started so that communities like Wiscasset can leave their nuclear experience behind?

Congress has required DOE to develop a spent fuel transport plan

In the fiscal year 2004 appropriations bill, Congress instructed DOE to work "more actively" with facilities storing spent nuclear fuel in order to develop a "detailed and comprehensive acceptance and transportation plan for the years 2010 to 2020" by the end of this year. Furthermore, Congress instructed DOE to develop a plan that would "ensure that spent nuclear fuel and high level waste from those reactor sites that are undergoing decommissioning...shall be accepted and transported as soon as practicable to facilitate the closure of those sites." I trust that DOE is on schedule to complete this plan.

Conclusion

In 1982 Congress made a deal with the American public. In exchange for a surcharge on their electricity, this body promised that the United States would build a safe, permanent facility to store nuclear waste by the end of the century. We have not made good on our promise. Until we make good on our promise, ratepayers, taxpayers, and people in small towns like Wiscasset, Maine will suffer, and we will all be more at risk.

The Decommissioned Plant Coalition testimony.

Finally, I would like to submit testimony from the Decommissioning Plant Coalition. This testimony was prepared for our September 11, 2003 hearing on this topic which had to be rescheduled.

PREPARED STATEMENT OF HON. JOHN DINGELL, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF MICHIGAN

For many years I have been concerned about the misuse of monies contributed to the Nuclear Waste Fund by utility ratepayers.

As many Members will recall, our Committee reported a bill in 1999 that would have taken the Fund "off budget." That bill had two purposes—to restore the Fund to its intended purpose, and to ensure that the Department of Energy's (DOE) repository program would be adequately funded. It is a shame that bill was not enacted while the nation enjoyed a budgetary surplus, because it bothers our colleagues on the Budget Committee when we try to restore the Fund to its proper purpose—and the task only becomes harder when deficits loom large, as they do today.

It is encouraging, however, that the Administration at last has begun to grapple with the need to put funding for the repository program on sound footing. The Administration has proposed a change in law that will automatically direct all future ratepayer contributions into the nuclear waste program, with costs in excess of the revenues requiring further appropriations. Rep. Shimkus has introduced a similar proposal.

Congress approved the Yucca Mountain site for a repository in 2002; DOE hopes to file an application for a license by the end of this year; and the Nuclear Regulatory Commission appears ready to commence consideration once the application is filed. Meanwhile, waste continues to pile up at utility and at DOE sites in dozens of states.

All of the agencies' preparations to date, which entailed the expenditure of \$6 billion from the Waste Fund already, will come to naught if funding reform legislation is not enacted.

I would note, however, that one shortcoming of these proposals is their failure to deal with the unexpended balance in the Nuclear Waste Fund, which is about \$14 billion. The bill reported by the Committee on Energy and Commerce in 1999 addressed the need to safeguard both the balance in the Fund and future contributions. It ensured that neither would be siphoned off to other purposes. By contrast, the bills before us appear to address only the question of future contributions—and do nothing to restore the existing Fund to its proper use.

My understanding is that over \$500 million of the current Fund has been contributed by Michigan ratepayers over the years. I have reservations about legislation that does not dedicate both existing and future ratepayer contributions to their proper use. Failure to restore amounts in the existing Waste Fund to their intended purpose would be tantamount to approving the subsidization by ratepayers of other wholly unrelated programs. That would be a breach of faith, and I am not convinced at this point that we should be settling for half a loaf in terms of budget reform.

Mr. HALL. I ask for unanimous consent that written statements from the Nuclear Waste Strategy Coalition and the Decommissioning Plant Coalition be made part of the hearing record. Without objection, it is so ordered.

[The information referred to follows:]

PREPARED STATEMENT OF NUCLEAR WASTE STRATEGY COALITION

Mr. Chairman, and distinguished members of the Subcommittee, the Nuclear Waste Strategy Coalition (NWSC) appreciates this opportunity to present a Statement for the Record regarding a hearing entitled, "A Review of the Department of

Energy's Yucca Mountain Project, and Proposed Legislation to Alter the Nuclear Waste Trust Fund (H.R. 3429 and H.R. 3981)."

ABOUT THE NWSC

The NWSC is an ad hoc group of state utility regulators, state attorneys general, electric utilities and associate members representing 46 member organizations in 25 states. The NWSC was formed in 1993 out of frustration at the lack of progress DOE had made in developing a permanent repository for spent nuclear fuel (SNF) and high-level radioactive waste (HLRW), as well as Congress's failure to sufficiently fund the nuclear waste disposal program (Program). The mission and purpose of the NWSC is to seek on behalf of the ratepayers of the United States:

- 1) The removal of commercial spent nuclear fuel from 72 temporary storage sites located in 33 states.
- 2) The authorization of a temporary, centralized commercial spent nuclear fuel storage facility.
- 3) The allocation of appropriate funds from the Nuclear Waste Fund (NWF) by the U.S. Congress to the DOE so that it will fulfill its statutory and contractual obligations.
- 4) The augmentation of transportation planning and regulations to facilitate transportation systems.
- 5) The capping of the NWF payments at the present one-tenth of a cent per kilowatt-hour by the U.S. Congress.
- 6) The operation of the permanent repository by 2010.

NUCLEAR WASTE FUND REFORM

NWSC members believe it is vitally important that Congress and the Administration work together to ensure the Program is funded in a manner that will allow the DOE to implement the Federal Program in accordance with the 1982 Nuclear Waste Policy Act (NWPA). The Program is already in default of its requirement to open a facility by 1998, and is in danger of slipping further behind schedule. It is imperative that a long-term fix of the current funding process be implemented and we urge Congress to support passage to reclassify the fees paid into the Nuclear Waste Fund as offsetting collections in the 108th Congress.

The members of the NWSC are supportive of H.R. 3429, the Nuclear Waste Financing Act of 2003 and/or the bill introduced by Chairman Barton, H.R. 3981. We note that H.R. 3981 would provide funds through the completion of the surface facility construction, whereas the funding reforms implemented in H.R. 3429 would end in 2010. Both propositions define contributions to the NWF as offsetting collections made to cover the necessary expenditures of the Program. Additionally, either of these funding reforms would make the total budget authority available from the NWF each fiscal year equal to the level of proceeds collected from fees (plus interest earned) during that fiscal year. Most importantly, Congressional oversight of the Program funding will continue, similar to the annual appropriations process of the Nuclear Regulatory Commission and the Corps of Engineers.

As the House Appropriations Energy and Water Development Subcommittee Chairman Hobson stated last year, "This Program has been starved for funding"...the 2010 deadline for waste fuel acceptance at Yucca Mountain, "is a pipe dream at existing funding levels." The only way that the DOE will ever achieve its objectives is for Congress to reclassify the Nuclear Waste Fund receipts as offsetting collections. Only with sufficient funding will the DOE be able to file the licensing application by December 2004, initiate the critical path items related to the transportation infrastructure systems plan and make financial commitment to its contractors. Moreover, delays beyond the 2010 deadline increase Program costs by approximately \$1 billion per year and also expose the DOE to further litigation.

NUCLEAR WASTE FUND

There are adequate funds available to implement the Federal policy for permanent disposal of high-level radioactive waste and spent nuclear fuel. That statement is conditioned on the premise that Congress will vote to support its own legislation—Congress has failed to support the NWPA. Since 1983, the NWF has collected more than \$22 billion with interest, and the nation's ratepayers make more than \$700 million per year in payments into the NWF; with interest credits this amount exceeds \$1.5 billion per year. According to the DOE, it will require average annual funding of \$1.3 billion from FY 2005 through FY 2010. The NWF's average annual receipts and interest are projected at more than \$2.1 billion over the same time period, and therefore, exceed the DOE's funding level requirements. Congress's sup-

port to codify the NWF annual receipts will ensure that every cent collected from the ratepayers will be delivered to the Program, as intended by the NWPA. Other Congressional programs should be funded from discretionary funds, not from the NWF's mandated funding.

PROGRAM OVERSIGHT OF THE CIVILIAN DISPOSAL PROGRAM

The NWSC is not calling for carte blanche funds for the DOE without Program oversight. We are encouraged that the FY 2004 House Energy and Water Development Appropriations Committee (Committee) Report 108-212 directed the DOE to keep the Program on track to meet its 2010 deadline. Consequently, the DOE/Office of Civilian Radioactive Waste Management (OCRWM), issued a Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain: A Guide to Stakeholder Interaction, issued on November 18, 2003. Further, the DOE/OCRWM identified on December 23, 2003, the Caliente rail corridor within Nevada as the preferred corridor to serve the Yucca Mountain repository.

However, we believe that the national transportation infrastructure system plans must be initiated as soon as possible to facilitate the shipment of SNF and HLRW to Yucca Mountain by 2010. Although the Strategic Plan is not specific with respect to scope and schedule milestones, the following encourages us:

- That OCRWM is now focused on collaborating with interested parties on designing, siting and constructing the infrastructure required for the transportation system.
- That beginning in 2004, OCRWM will increase interactions with states and tribes to update and prioritize topics for discussion and work together throughout the planning, operational testing and operations phases of the transportation program.
- That starting in 2004, OCRWM will validate information with nuclear utilities on site operational and transportation interfaces that determine cask requirements and site servicing equipment needs. As stated in the Plan, this is an opportunity for OCRWM to improve waste acceptance and transportation planning process to allow for more efficient planning, scheduling and operation of the transportation system; hopefully, the final scheduling of SNF deliveries will be at an earlier time than now required.
- That beginning in 2006, OCRWM will shift interactions with state regional groups and tribes from topic identification and resolution to conducting emergency training and operational readiness.
- That OCRWM recognizes the need to begin interaction with cask vendors as soon as possible and before beginning the formal procurement process, the need to interact with private-sector cask suppliers and utilities to solicit information, as well as private sector views on approaches to establishing the necessary system design and cask fleet on a timely and cost efficient basis.
- That OCRWM is open to discussions with the utilities concerning the acceptance of dual-purpose storage/transportation cask systems that have been certified by the NRC. We urge that those discussions begin immediately and that they focus on the most efficient transportation/acceptance of such systems and not on whether such systems are acceptable.

While we understand the need for a flexible approach in order to accommodate input from stakeholders, the NWSC was expecting a Strategic Plan that provides more than a simple process outline, but a Plan that contains milestones or specific direction as to how OCRWM will achieve its objective to begin the removal of SNF and HLRW by 2010. The NWSC believes the Plan should include:

- Interim milestones that would benchmark the OCRWM's progress over the next few years.
- Specific schedules by when OCRWM will initiate interaction with private-sector cask suppliers, utilities, logistics providers and others in the transportation industry to establish the necessary system design and cask fleet needed by 2010.
- Consideration of transporting Greater-Than-Class-C (GTCC) waste that is currently being stored in NRC-licensed transportable canisters at nuclear plant sites undergoing decommissioning. There is no doubt that ultimate disposal of GTCC is the Department's responsibility, accordingly, this is an issue that OCRWM should address within the scope of the national strategic transportation plan.
- Specific schedules or milestones that address the national designation of modes and routes of shipment to Yucca Mountain.

The members of the NWSC also note that this Plan fails to incorporate and update the report released by OCRWM, January 2001, in response to the House Com-

mittee on Appropriations request, "Plan for Transportation Cask Fabrication and the Deployment of Waste Acceptance Capabilities."

Over the years, the NWSC has been very supportive of the OCRWM program and worked to ensure that Congress appropriate sufficient funds for the nuclear waste transportation and disposal program. We continue those efforts today as we are working very hard for passage of H.R. 3429 or H.R. 3981, as we believe it will allow the DOE to receive appropriate funding increases to keep the repository program and transportation infrastructure planning on schedule. Just as importantly, the NWSC believes passage of either of these bills will ensure money paid by the nation's ratepayers into the NWF will be used for its intended purpose to remove SNF and HLRW from the nation's nuclear power plants.

LAWSUITS

It is more than five years since the DOE defaulted on its obligations, as stated in the Nuclear Waste Policy Act of 1982, to remove SNF from the nation's nuclear power plants. In its 1996 Indiana-Michigan decision, the U.S. Court of Appeals affirmed that the DOE was obligated to start moving waste on January 31, 1998, "without qualifications or condition." The DOE ignored the Court, prompting 46 state agencies and 36 utilities to again seek relief through the Courts. The DOE has meanwhile ignored repeated Court orders to begin moving waste from commercial nuclear plant sites on the grounds that it has yet to build a permanent repository and has no authority to provide an interim storage and transport of high-level nuclear waste from plant sites. Several lawsuits are currently being heard in the U.S. Court of Claims and could find the DOE liable for several billions of dollars in damages due to its failure to meet its 1998 obligations. Further, the 11th Circuit Court of the U.S. Court of Appeals has already ruled that these damage payments will not come from the Nuclear Waste Fund. Consequently, Congress will have to choose where the funds should come from and which programs will be affected. As stated earlier, if the DOE fails to meet the 2010 deadline, the financial liability the DOE faces through lawsuits will continue to mount. As the DOE continues to delay honoring its contracts with the utilities to remove spent nuclear fuel from plant sites, both the amount of SNF and HLRW stored and the costs associated with storing it increase. A DOE contractor has estimated that each year's delay will escalate Program costs by approximately \$1 billion per year for the civilian and defense nuclear waste disposal programs. The longer Congress refuses to fully fund the DOE requirements, the greater the potential liability will be to the nation's taxpayers.

TRANSPORTATION—RIGOROUS SAFETY STANDARDS

The DOE has proven that it can safely transport SNF and HLRW from plant sites across the nation. Since the 1960s, more than 3,000 shipments of spent nuclear fuel from nuclear power plants, government research facilities, universities and industrial facilities have crossed the United States, "without a single death or injury due to the radioactive nature of the cargo."¹ This equates to more than 70,000 metric tons of SNF, an amount equal to what the NWPA authorizes for Yucca Mountain. Shipments include 719 containers from the Naval Nuclear Propulsion program between 1957 and 1999, and 2,426 highway shipments and 301 railway shipments from the U.S. nuclear industry from 1964 to 1997. In addition, since 1996, shipments of spent nuclear fuel have been safely transported to the United States from 41 countries to the DOE facilities;² again, without a single death or injury.

Furthermore, the DOE has safely and successfully made more than 2,405 shipments to the Waste Isolation Pilot Plant (WIPP) in New Mexico as of March 15, 2004.³ The Western Governors' Association (WGA) signed an agreement with the DOE in April 1996 that affirmed regional planning processes for safe transportation of radioactive waste. All regional high-level radioactive waste transportation committees also endorsed the WGA approach. The WIPP transportation planning system is setting the standard for safety and proving to be a critical step toward solving the nation's spent nuclear waste disposal transportation program.

To ensure safety at on-site spent fuel storage facilities and during transportation, the material is stored in containers that meet the NRC's rigorous engineering and safety standards testing. To satisfy the NRC's rigorous standards for subsequent transportation approval, these containers have been dropped 30-feet onto an unyielding surface, dropped 40 inches onto a 6-inch vertical steel rod, exposed for 30 minutes to a 1,475°F fire, submerged under 3 feet of water for eight hours, im-

¹ National Conference of State Legislatures' Report, January 2000.

² U.S. Department of Energy Report to the Committees on Appropriations, January 2001.

³ Waste Isolation Pilot Plant Information Center, March 15, 2004.

mersed in 50 feet of water for at least eight hours (performed in a separate cask), and immersed in 656 feet of water for at least one hour.⁴

Nonetheless, unless sufficient funds are allocated, the DOE will continue to defer the much need transportation infrastructure systems plan in Nevada and site preparation activities that would allow acceptance of SNF and HLRW at Yucca Mountain by 2010.

CONCLUSION

For the last 20 years, those who want to derail commercial nuclear power in this country have used this program as a political tool. In fact, the Federal government's failure to deliver extends back several decades. The U.S. Congress and the Federal government must immediately address the growing problem of SNF and HLRW that now exists. We can no longer pretend that stranded waste at plant sites does not exist and is without economic consequence to the nation's energy supply as witnessed in August 2003. We can no longer pretend that the problem of stranded SNF and HLRW is going away. While Congress acts to solve the Federal deficit problem, it is unacceptable that Congress would continue to utilize ratepayers' money from the NWF—it should be used for its intended purpose. The nation's ratepayers continue to make payments into the NWF for the purpose of disposing SNF and HLRW from the nation's nuclear power plants. The American people are right to expect funds from the NWF to be released for this purpose and not be used to provide accounting camouflage for other Federal spending. Use of the NWF for other purposes has been, and continues to be, an unjust and fraudulent tax on the American electricity consumer. Further delay by Congress to resolve the funding of this Program will guarantee that U.S. taxpayers will pay all of the costs associated with liabilities of the DOE to accept SNF and HLRW by 2010. The Courts have already stated that the liability for inaction will not be paid from the NWF.

The members of the NWSC reiterate the importance for Congress to keep the DOE on target and schedule by reclassifying the NWF annual receipts as offsetting collections to bring the nuclear waste disposal program to fruition as promised and mandated by the Nuclear Waste Policy Act of 1982.

PREPARED STATEMENT OF THE DECOMMISSIONING PLANT COALITION

The Decommissioning Plant Coalition (DPC) is pleased to provide a statement for the record on the Department of Energy's spent nuclear fuel program. The Energy & Commerce Committee's long-standing interest in this program and the years of oversight that you have provided has had a major positive impact on this program. Indeed, at times, it has seemed that only the continued strong interest of the Congress has kept the program from succumbing to the undeniably difficult challenges of siting this one of a kind geologic facility.

As we all know, the Yucca Mountain program received considerable attention in the last Congress, leading to the bi-partisan approval of President Bush's site recommendation decision. Now, more than two decades after the original Nuclear Waste Policy Act was adopted in 1982, the Department of Energy's spent nuclear fuel program has once and for all identified a site and is poised to submit a license application for Yucca Mountain.

And, given the relatively limited resources that the Office of Civilian Radioactive Waste Management (OCRWM) has been forced to operate under, we believe they were correct in the decision to focus almost exclusively in the last year on the steps necessary to meet their December 2004 date for submittal of the license application. We are extremely grateful for the management initiatives that Director Chu has instituted to begin focusing the Department and contractor workforce on their difficult licensing tasks.

However, we also believe that the progress made to date and both short and longer-term timelines are at risk and we urge the Committee to insist that the Department adopt an integrated approach in the implementation of various program elements. Specifically, we believe that there is a need to facilitate early decisions on outstanding waste acceptance, storage, and transportation issues if the goal is a fully functioning program in 2010.

The Decommissioning Plant Coalition

The Decommissioning Plant Coalition was established in 2001 to highlight issues unique to nuclear power plants undergoing decommissioning. The DPC is focused

⁴Nuclear Regulatory Commission, Testing Requirements, 10 CFR Sections, 71.61, 71.71, and 71.73.

on addressing the needs of decommissioning reactors at single-unit sites, of which there are six currently undergoing active decommissioning. Members of the Decommissioning Plant Coalition include Connecticut Yankee Atomic Power Company, Dairyland Power Cooperative, Maine Yankee Atomic Power Company, Sacramento Municipal Utility District, and the Yankee Atomic Electric Company.

Collectively, these plants have a total of 1349 metric tons of heavy metal (MTHM) under management. This represents approximately 2% of the total amount of commercial spent fuel destined for final disposal. Despite the relatively small volume of spent fuel at these facilities, the cost of spent fuel and high-level waste management represents a disproportionately large issue for DPC members. For example, Maine Yankee estimates that spent fuel management represents 28% of the total decommissioning cost for its facility. This disproportionate economic impact is even more acute for nuclear facilities that have already completed other decommissioning tasks and for whom the costs of monitoring spent fuel and maintaining necessary safeguards and security measures represent virtually 100% of operating expenses at that site.

The members of the Decommissioning Plant Coalition play a unique role among our colleagues in the nuclear industry in that we have been forced to confront and address many of the more difficult spent fuel issues that operating plants might have the opportunity to defer. As such, we are at the leading edge of spent fuel management issues and are currently facing challenges that will ultimately confront the whole industry.

Strategic Considerations: Continuing Improvement to the Program

While the Department of Energy has made considerable progress with the Nuclear Waste program in recent years, we believe that there is need to supplement the near-exclusive focus on preparation of the license application for Yucca Mountain and accelerate its maturation into a fully integrated spent fuel management system. Specifically, we are concerned that DOE has not yet demonstrated its ability to develop and implement a program to expeditiously identify and address critical waste acceptance, storage, and transportation issues, especially those that affect the ability of spent fuel contract holders to make decisions affecting their own facilities.

The uncertainty in waste acceptance, storage, and transportation plans creates a number of special concerns for members of the Decommissioning Plant Coalition. First, unresolved fuel acceptance and storage issues create current and ongoing uncertainty for operators of decommissioning nuclear power plants. This uncertainty introduces doubt into every decision that the owners have made or are about to make regarding investment in storage and transport technologies. It calls into question every assumption and plan governmental officials make about the future productive use of the site. For example, we note that the Department has seemingly reversed its position on the acceptance of dual-purpose storage and transport systems that it once urged our members to procure. It also means that security resources have to continue to be devoted to a site, in increasing increments, where the threat should have been or would have soon been removed.

The Department's ongoing delays in reaching decisions has a direct and current impact on these sites, and the Department must, in our view, begin to make these decisions now. We are concerned that the Department is being overly cautious in making at least some of the decisions because of internal legal considerations. As such, we applaud direction in the Appropriations Committee's report on the FY 2004 Energy and Water Development Appropriations bill reminding the Department "[D]elaying the resolution of pending litigation and avoiding potential future litigation are not the objectives of this program. The best way to minimize the liability of the Federal government for spent nuclear fuel is to get on with the repository program in an expeditious manner."

Another aspect of the program that has been identified as needing redress is under funding, a situation that is becoming chronic despite the fact that a dedicated nuclear waste fund fee is being collected from electric ratepayers specifically dedicated to this program. As a result of resource constraints, a number of important program elements not related directly to the core scientific investigations of Yucca Mountain, but nevertheless essential to operation of a repository, have suffered from neglect and a lack of adequate funding.

For example, FY2003 omnibus appropriations funding mark of \$460 million for the nuclear waste program was a \$131 million reduction from the President's FY 2003 budget request. In his testimony last year, Secretary Abraham suggested that the funding shortfall imperiled the program by introducing a "high risk" to DOE's ability to meet a December 2004 license application date.

The DPC was extremely pleased to see the funding increase that the program received in last year. While generous compared to previous allocations, the \$576.6 al-

location barely met the minimum funding needed to prevent further schedule slippage. In addition, the FY 2005 request for \$880 million represents a significant but necessary increase in funding. We and other key stakeholders in this program would be extremely disappointed to see the program announce further delays as a result of funding below requested levels.

To that end, we applaud to Administration for proposing to credit annual fees collected against appropriations from the Nuclear Waste Fund. This will help ensure that the fund is used for its intended purpose and that the government does not further delay meeting its legal obligation to remove used nuclear fuel from commercial sites. This badly needed funding reform, proposed in the Administration's budget submittal, H.R. 3981, introduced by request by Chairman Barton, and H.R. 3429, the Nuclear Waste Financing Act or 2003, introduced by Representatives Shimkus and Rush, is critical to the timely success of this program

Additional DPC Recommendations

In addition to the strategic approaches that we have discussed, we have number of specific recommendations that we believe will help to advance the program.

Recommendation: Comprehensive National Acceptance and Transportation Plan

First, the Department must work actively with the decommissioning plant contract holders and the DOE sites that will be shipping spent nuclear fuel and high-level waste to the repository to develop a detailed and comprehensive acceptance and transportation plan for the years 2010 — 2020. DOE has encouraged owners to invest in storage and transport technologies that it once sought appropriations to build on its own and were identified as acceptable but now says it may not accept. DOE must also design the Yucca Mountain fuel handling and storage facilities so that they can accept fuel stored in the currently NRC licensed transportation/storage system as "Standard Fuel" under the DOE/Utility Standard Contract. While both commercial and non-commercial sites have spent nuclear fuel and nuclear waste stored in dual-purpose containers, it is of particular importance to DPC members and other utility contract holders who are moving fuel to dry storage.

We cannot stress the importance of this recommendation strongly enough. DOE should negotiate with contract holders to reach a timely decision on the schedule for acceptance of spent nuclear fuel stored in existing NRC-licensed storage and transport systems. As such we were extremely pleased to see the language in last year's Energy and Water Development Appropriations report directing the Department to establish a Comprehensive National Acceptance and Transportation Plan. Development of such a plan in close contact with contract-holders will force a reassessment of how all program elements fit together, where bottlenecks exist and hopefully, where schedule slippage can be recovered. If the DOE does not design the Yucca Mt. fuel receipt and the transportation systems to be compatible with the currently NRC licensed storage/transportation systems, then they could classify the fuel in those systems as "non-standard" causing that fuel to lose its place in the DOE's fuel acceptance queue. This would mean a delay of many years at many millions of dollars cost before these shutdown plant sites are cleared of fuel.

Because of the importance of this issue to DPC members and due to the fact that much of the transportation system will require direct interface with contract holders' physical sites, we strongly support the notion that the Department should interact directly with contract holders notwithstanding legal strategies and tactics favored by the Department of Justice.

As an example of the need for integration that could be addressed by a comprehensive plan, we are concerned that the Department's rail transportation decision-making matrix and schedule seems to be disconnected from other decisions even within the Waste, Acceptance, Storage and Transportation (WAST) functions related to canister acquisition and deployment to contract holder sites. Furthermore, the current schedule will result in a delay of the implementation of a fully functioning rail transportation system until well after opening of the repository. Such a delay could result in truck-only shipments for the first years of the program, significantly increasing transportation costs and negating the benefits of large multi-purpose canisters already in use at a number of contract-holder sites.

Another example of the benefits that would be expected to derive from such a plan would be for the Department to confront and resolve the issues related to acceptance and management of Greater-Than-Class-C (GTCC) waste. The Department should either ensure that the detailed acceptance criteria that will be part of the license application include appropriate criteria and specifications for GTCC waste, or present Congress with a separate plan proposing an alternative disposal path for this material.

Finally, we also applaud the House Appropriations Committee for directing the Department to specifically address the special needs of decommissioning plants. Report language accompanying this year's funding bill requires the Department to ensure that spent nuclear fuel and high-level waste from those reactor sites that are undergoing decommissioning will be accepted and transported as soon as practicable to facilitate the closure of these sites. Along those lines, we would refer you to one valuable recommendation from the GAO Report that this subcommittee requested on security of spent nuclear fuel facilities. Specifically, the report suggests the early shipment of fuel currently stored at shutdown reactor sites reducing the number of sites storing fuel that need protecting.

Recommendation: Demonstration Pilot Project

As previously mentioned, decommissioning plants represent the leading edge of issues that must be confronted eventually by all contract holders. We therefore see significant value in requiring the Department to establish a pilot program to be initiated in FY 2005 to demonstrate and test all elements of the Waste Acceptance, Storage & Transportation program. In developing the plan, the Department would assume, and take those actions necessary to ensure, that fuel in NRC licensed storage and transportation systems are acceptable and standard waste forms under the Standard Contract.

As we envision it, the plan would specify the activities to be tested, milestones for decisions, and the funding necessary to carry out the pilot, including the movement of fuel by DOE under the pilot.

Such a pilot project would benefit members of the Decommissioning Plant Coalition by providing direct relief for a small portion of the overall waste inventory, but more importantly would provide systemic benefits for all nuclear plant owners and the Department by demonstrating work that will be critical path for operations once a repository is ready for fuel acceptance.

In addition, much of the developmental work done by the Department of Energy to prepare for moving spent fuel to Yucca Mountain is being done "in a vacuum" without the "real world" perspectives of operating companies. Critical activities, such as preparing Operational Readiness Tests and Demonstrations, would benefit greatly by working directly with actual spent fuel facilities in a formal pilot project. Indeed, virtually all elements of the fuel transportation campaign could benefit from the experience in spent fuel management, loading, transport and handling equipment that is in limited supply and may be unavailable to the DOE.

Another potential benefit of a demonstration pilot project would arise if the Department and Congress were in the future to determine that a limited early acceptance program at a licensed facility would demonstrate the workability of the program. In that event, the pilot project that we envision would provide a ready platform for demonstrating the compatibility of current licensed storage/transportation systems at Yucca Mountain.

DOE recognized the potential importance and benefits of removing spent fuel from shutdown reactors when it established its contracts for disposal of spent fuel. Those contracts provide that priority may be accorded any spent fuel removed from a civilian nuclear power reactor that has reached the end of its useful life or has been shut down for whatever reason. As we have already noted, the earlier referenced GAO Report acknowledged the economic and security benefits of such action.

Recommendation: Long-Term Budget Reform

As we have indicated throughout this testimony, one of the problems that has confronted the program in recent years has been the lack of resources for fully funding the many activities that will be required to finally take acceptance of, transport and dispose of spent nuclear fuel. Final appropriations for the program have fallen perennially short of amounts requested by the Department to meet its statutory and contractual obligations. Last year, Secretary Abraham noted that these funding shortfalls place many elements of the program at "high risk" for not being ready for implementation when needed.

Obviously we are gratified by the decision in the Energy and Water Development Appropriations for FY 2004 to provide nearly \$580 million. These additional funds, coupled with sound programmatic direction, were sufficient to prevent additional schedule slipping. Now, going forward, the program must have sufficient funds not only to complete the Yucca Mountain license application in December of this year, but also to fund a robust waste acceptance program that can meet the need to accept and transport spent fuel by 2010 in more than nominal amounts.

As the members of this committee well know, the budgetary and programmatic requirements to accomplish these two tasks will accelerate significantly beginning in FY 2005. Given the myriad competing demands for federal discretionary spend-

ing, it seems prudent to reconsider the mechanisms for funding this program. As such, we were pleased when Reps. Shimkus and Rush introduced H.R. 3489 last year. Likewise, we were very pleased to see the similar approach proposed by the Administration in the FY 2005 budget request. We urge you to enact such legislation this year.

Conclusion

We applaud Congress and the Administration for efforts that have been made to complete the Yucca Mountain site characterization effort, culminating in the site recommendation and approval. Now however, the Department needs a new program focus that integrates all program elements and begins to answer important questions that have not received needed attention. Specifically, we believe the Department must pay particular attention to a number of waste acceptance and transportation issues that have remained unresolved for a number of years. These issues have created uncertainties that have unnecessarily complicated important decisions for contract holders and are especially sensitive for decommissioning single-unit sites.

We commend the Subcommittee for your attention to these issues and look forward to working with you and Department to resolve them as we move forward to achieving our mutual goal of safe and economical disposal of commercial spent nuclear fuel.

Mr. HALL. Now, at this time, we are very pleased to have the Honorable Robert H. Card, Under Secretary of Energy, accompanied by Margaret Chu, Dr. Chu, Director of the Office of Civilian Radioactive Waste Management, U.S. Department of Energy.

And at this time, we are certainly happy and pleased to recognize our friend, Bob Card.

STATEMENTS OF HON. ROBERT H. CARD, UNDER SECRETARY OF ENERGY; ACCOMPANIED BY MARGARET S.Y. CHU, DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Mr. CARD. Mr. Chairman, thank you. I find it difficult to improve on your opening statement, or that of the ranking member, but I just want to make three quick points. First, in many ways the repository is vital to the national interests.

It benefits all citizens of the country, especially the 160 million who live within 75 miles of nuclear facilities, which are located in 39 States, at 127 sites. The President and Congress affirmed this vital interest in their overwhelming legislative support for the repository siting.

Second, I am pleased to say that this project is on track. We expect to submit a license application to the NRC in December, and we will be able to receive waste in 2010. Last, you recognize that keeping the project on track requires adequate funding. A special assessment of rate payers was established to pay for the portion of the repository costs from commercial nuclear power.

Millions of rate payers, homes and businesses across the Nation, have paid over \$20 billion in fees to support the project. By not making those fees available, it drives up rates to our costs, and adding insult to injury, and denies them and their neighbors the environmental safety security and clean energy benefits of having a repository available in a timely manner.

This project deserves our collective continuing backing to carry out its Congressional and Presidential mandates. Again, we are grateful for today's support and look forward to your questions and comments. Thank you.

[The prepared statement of Hon. Robert H. Card follows:]

PREPARED STATEMENT OF ROBERT CARD, UNDER SECRETARY OF ENERGY

INTRODUCTION

I appreciate the opportunity to testify about the Department of Energy's program to implement our Nation's radioactive waste management policy, as established by the Nuclear Waste Policy Act of 1982, as amended. The Act requires safe, permanent geologic disposal of spent nuclear fuel and high-level radioactive waste resulting from the Nation's commercial nuclear power and atomic energy defense activities. The disposal of this material in a geologic repository is needed to protect public health and safety and the environment, to maintain our energy options and national security, to allow the cleanup of former weapons production sites, to continue operation of our nuclear-powered naval vessels, and to advance our international non-proliferation goals. The Department's consolidation of spent nuclear fuel and high-level waste from 127 sites at a single secure, remote location in an arid desert, far from cities, schools, and water supplies, is vital to our national interest. As I will discuss at greater length in a moment, the Federal government is contractually required to implement a permanent solution for management of commercial spent nuclear fuel, in return for which utilities and ratepayers have paid fees to cover the costs of disposal.

The Administration and the Congress have recognized these important national benefits and supported the Department's geologic repository program. This support was underlined in 2002 when bipartisan majorities in both houses of Congress voted to pass a joint resolution approving the Yucca Mountain site for a repository, and the President signed that resolution into law (Public Law No. 107-200).

With the approval of Yucca Mountain as a suitable repository site, the program's focus has shifted from scientific study to the design, licensing and construction of a repository and the development of a transportation system. I am happy to report that the Program is on track to complete the scientific, technical and design work required to submit a license application to the Nuclear Regulatory Commission (NRC) in December 2004 and to begin repository operations at Yucca Mountain in 2010.

To accomplish these objectives will require a substantial increase in funding over historical levels. We estimate, for example, that from 2005 to 2010 it will cost about \$8 billion to construct the repository and develop the transportation system. That would average more than \$1 billion a year, much higher than our previous annual appropriations. If these funding levels are not achieved, we cannot meet the 2010 goal.

Today I would like to focus attention on the Administration's legislative proposal that is designed to make it easier for Congress to provide the necessary funding levels. Action on the Administration's proposal is needed as soon as possible to enable the program to stay on track.

The Nuclear Waste Funding Problem

Enactment of the Administration's legislative proposal would help rectify a long-standing inequity imposed on all of the tens of millions of households who use nuclear-generated electricity. Since 1983 these households have been paying a fee on every kilowatt-hour of nuclear electricity they use, in order to fund the development of a repository for disposal of the used fuel from the nuclear reactors producing that electricity. They are not being treated fairly. By law that money is being collected for one purpose and one purpose only—performance of "nuclear waste disposal activities" through the development of a repository. In actuality, much of the total that has been collected sits unused, but on a year-to-year basis, the fees not appropriated are used to offset other federal programs.

The problem is compounded by the fact that the fee is part of a legally binding contractual agreement mandated by Congress in the Nuclear Waste Policy Act that the Department of Energy entered into with the nuclear utilities. In that contract, the Department was required to begin accepting the used fuel for disposal beginning by January 31, 1998, in exchange for utilities' payment of the fee. The fact that this fee is a *quid pro quo* payment in advance for a contractually required service to be performed by the federal government—a legal obligation affirmed by the federal courts—sets it apart from most other federal user charges and taxes and justifies special consideration in the budget process.

The fee was to be placed into a Nuclear Waste Fund and used to pay the full cost of developing and operating the facilities needed to meet the federal government's commitment to conduct nuclear waste disposal activities mandated by the Nuclear Waste Policy Act, and for that purpose alone. This funding mechanism was designed to ensure that the Department of Energy's high-level waste program would have the

funds it needed as it needed them in order to get the job done, and that the federal taxpayer did not pay for it.

The utilities and their ratepayers have been keeping their part of the bargain since 1983. Unfortunately, the federal appropriations process is increasingly constraining the ability of the federal government to do its share. Because the fee revenues are classified under budget control legislation, as mandatory receipts, they are treated just like general tax revenues and deposited into the federal treasury with no impact at all on the ability of the appropriators to fund the program for which the fees are being paid. As far as the millions of ratepayers are concerned, the fee appears to be just one more federal tax instead of the payment to ensure the delivery of a service that it was intended to be.

Over the last 10 years, ratepayers of nuclear utilities have averaged annual payments into the Fund of about \$636 million, while appropriations from the Fund averaged \$198 million. The total unspent balance in the Fund is nearly \$15 billion. Until recently, the waste program's requirements were substantially below the annual fee collections. Beginning with the FY05 budget, however, that situation has changed, with program requirements equaling or exceeding projected income from the fee. To ensure that the waste fee revenues are fully available for their contractually obligated purpose, they need to be reclassified from mandatory to discretionary so they can directly offset the appropriations from the Fund.

If the federal government is to honor its solemn legal obligation, it must act now to ensure that the moneys obtained from millions of ratepayers are applied to their intended purpose. The clear objective of the Nuclear Waste Policy Act is not satisfied by letting the money accumulate unspent in the Fund, as is happening now. Instead, it requires that these funds be used at the time and in the amounts needed to deliver on the contractual obligation that justifies their collection in the first place.

Need for a Funding Remedy to Avoid Delays and Cost Increases

The Department of Energy recognized long ago that it would not be able to open the repository contemplated by the Nuclear Waste Policy Act by 1998. Since 1989, however, it has held to the firm goal of beginning repository operations by 2010. Meeting the 2010 objective will require much greater resources than the program has thus far received. If Congress appropriates less than requested by the Administration, the schedule for repository operation would be jeopardized.

This would not be fair to the ratepayers, and it would not be fair to the taxpayers, since they will both pay if there are further delays in meeting the government's contractual obligations. Those taxpayers who are also ratepayers will pay twice.

Delay could lead to additional costs in three ways:

1. Delay would increase the cost of the waste program. If funding constraints drag out construction, it would add unnecessary years of overhead costs and prevent the facilities from being constructed as efficiently as possible. Under the full cost recovery provisions of the Nuclear Waste Policy Act, any cost increases would have to be passed on to the utilities and their ratepayers through the fee. It is not hard to imagine how they would respond to being required to pay additional costs that resulted from refusal of the government to make full use of the funds they have already been paying so faithfully.
2. Delay would add costs of nearly a billion dollars per year for commercial utilities and federal defense nuclear waste sites to continue to provide temporary storage. Ratepayers will bear the costs of utility storage in addition to continuing to pay for a repository, and all taxpayers will pay for storage of the defense waste.
3. Delay could increase the damages the federal government will have to pay for failure to meet its contractual obligations, damages that will be borne by taxpayers. The government's liability for damages for not beginning to take commercial spent fuel in 1998 already has been established by final court decisions. While an accurate calculation of damages must await determinations by the courts, it is not unreasonable to assume that the amount of damages will be substantial and will increase with each year of delay. There is nothing in the law or the contracts that allows lack of appropriations to be used as an excuse for failure to meet the statutorily-required contractual obligations.

In short, everyone loses if we don't fix this funding problem soon. The country will be forced to spend billions of extra dollars, without solving the waste problem. Nuclear waste will remain at sites near communities and water supplies throughout the country, and we will not have finished the job of cleaning up the Cold War legacy at defense sites.

The Administration's Proposal

We believe a solution to this problem is the Administration's proposal that has been put forward to the Congress and introduced by request as H.R. 3981. The essence of this proposal is to reclassify the revenues from the nuclear utility fees so they can be used in the way that was intended when the Nuclear Waste Policy Act was passed: to develop a repository for disposal of high-level radioactive waste and spent nuclear fuel. Specifically, under the Administration's proposal, the amount of receipts from annual fees would be credited as offsetting collections. The amount credited as offsetting collections would still be subject to approval in an appropriations act, but could be appropriated without reducing the funding that would be available for other federal programs.

I should add that the Administration also appreciates the efforts of Congressman Shimkus, Congressman Rush, and the other bipartisan supporters of their bill, H. R. 3429, which seeks the same goal of reclassification of the nuclear waste fee revenues so they can be used to offset appropriations.

In light of the issues and concerns just described, we urge you to give careful consideration to the Administration's proposal to correct the constraining way these moneys are now being treated.

As you consider the Administration's proposal, let me correct two misconceptions about it—

First, despite misrepresentations by some critics, it does not reduce Congressional control of the program's budget in any way. Congress will still have to appropriate the funds, as required by the Nuclear Waste Policy Act. The effect of the proposal is simply to ensure that Congress can focus its appropriations decisions on ensuring that the funds are used effectively and efficiently to meet the objectives of the Act, without having to worry about the impact on the funding of other programs within the Energy and Water Development appropriation. Why should other programs continue to have to compete with a contractually mandated program that is, or is intended to be, fully self-financing? That competition will only get worse as damage judgments increase the pressure to keep the repository on track.

Second, the principle supported by the proposal is specific to the highly unusual contractual arrangement required by the Nuclear Waste Policy Act, and is unlikely to be relevant to many other federal activities. Simply stated, whenever the Federal government, pursuant to an explicit statutory requirement, makes a legally binding contractual commitment specified by that statutory requirement to perform a well-defined service in exchange for payments that cover the costs of that service, it should treat those payments in a way that ensures that they are used for the statutorily-specified contracted purpose. It is hard to see how anyone could disagree with that principle. Likewise, it is hard to see how such distinctive—if not unique—statutory obligations could threaten the ability of Congress to weigh competing demands for appropriations in other, unrelated areas.

Let me repeat one key point: The Federal government is contractually obligated to perform the service for which these fees are paid. Over 65 lawsuits have been filed in the U.S. Court of Federal Claims for damages for failure of the government to meet that obligation. The Court of Appeals has already established liability in at least some of the cases, and the first case to proceed to trial to determine the scope of the damages for which the government will be liable recently concluded. Passage of this legislation to help assure adequate funding for the waste program would send a strong signal to the ratepayers, the utilities, and the court that the Federal government is indeed serious about meeting its obligations. Failure to ensure full funding of the waste program could have quite the opposite effect, at a most inopportune time.

Importance of Timely Action

Some people argue that because of federal budget constraints, now is not the time to increase appropriations for the waste program, much less to make changes in the budgetary treatment of the waste fee. If past decisions are any guide, federal courts are not likely to accept funding limitations as an excuse for failure to meet contractual obligations. In a case from the Depression era involving a federal law, the Economy Act, that stopped payment on government-issued insurance policies, the Supreme Court concluded: "No doubt there was in March, 1933, great need of economy. In the administration of all government business economy had become urgent because of lessened revenues and the heavy obligations to be issued in the hope of relieving widespread distress. Congress was free to reduce gratuities deemed excessive. But Congress was without power to reduce expenditures by abrogating contractual obligations of the United States. To abrogate contracts, in the attempt to lessen

government expenditure, would not be the practice of economy, but an act of repudiation.”¹

The Administration and many in Congress understand the magnitude of the injustice being inflicted on households using nuclear electricity and recognize the need to end it. A number of proposals have been advanced before, to no avail. It is time to stop arguing about which approach would be best, and adopt one that will start to fix the problem. Procrastination will not make it any easier to do the right thing later. We need to take action now to ensure that inappropriate funding constraints do not prevent us from achieving the goal of operation of a repository in 2010.

Status of the program

Let me talk for a minute about the current activities of the program. By decisively approving the President's recommendation of the Yucca Mountain site, Congress allowed the process of developing a nuclear waste repository to proceed to the next step, recognizing that the independent experts at the Nuclear Regulatory Commission deserve the right to review the 24 years of scientific study of Yucca Mountain and to consider the site for a license. As I stated earlier, the program is on track to complete the work required to submit a license application to the Nuclear Regulatory Commission in December 2004 and to begin repository operations at Yucca Mountain in 2010, providing that action is taken to ensure that the necessary funding is provided throughout that critical period.

FY 2005 is a critical year in which important activities must converge if we are to meet the 2010 objective. In FY 2005, the program will be fully engaged in the licensing process. At the same time, it must initiate certain activities in the near term to permit timely construction and ensure readiness for operations. These activities, in the areas of repository readiness and detailed design, transportation system development, and waste acceptance readiness—along with licensing activities—lead to the program's total budget request for FY 2005 of \$880 million. While this is a significant increase over historical funding levels, it is an increase that has been carefully planned and understood for many years. We are confident that the program is positioned to commit funds effectively to defend the license application; to accelerate repository surface, subsurface, and waste package design work needed for construction authorization; and to conduct conceptual and preliminary design activities for Nevada transportation. Moreover, a major portion of the increase represents procurements: transportation cask acquisition and important repository site safety infrastructure upgrades.

In view of the change in focus of the program since the site recommendation and approval, several steps have been taken to turn the program into a project-oriented organization that can manage capital projects efficiently and cost-effectively and secure a repository license from the NRC. The program is committed to achieving a project management and organization culture founded on the highest standards of safety and quality. The program's "human capital" has been significantly strengthened by installation of a new senior management team with strong skills and extensive experience in the successful management of large capital projects. The Department is putting in place numerous far-reaching management measures, such as a Capital Asset Management Plan and earned-value management system for the program, and undertaking annually a comprehensive, independent external financial, cost, schedule, and technical audit of the program. The program has also undertaken major management initiatives to improve performance in such areas as Quality Assurance, Safety Conscious Work Environment, and Corrective Action, and to better define roles, responsibilities, authority and accountability. These initiatives have better positioned the program to be a successful NRC licensee and to meet mandated requirements for a safe repository, and will help ensure that funds are spent in a way that merits the confidence of Congress and the public.

The program plans to submit to the NRC, by December 2004, a high-quality, defensible license application that meets regulatory requirements, merits the NRC's confidence, and supports construction authorization in December 2007. By the end of FY 2004, with the funds appropriated, we will have:

- Addressed all "key technical issue" agreements that the Department and NRC agreed the program needed to address prior to license application submittal.
- Completed required elements of the preliminary design for the waste package, surface facilities, and subsurface facilities in support of the license application.
- Completed the safety analyses for Department-owned spent nuclear fuel and high-level radioactive waste, and Naval spent fuel for the license application.

¹ *Lynch v. United States*, 292 U.S. 571, 580 (1934)

- Completed the total system performance assessment postclosure report in support of the license application. This report will reflect increased understanding of how emplaced nuclear waste will interact with the natural and engineered barriers after the repository is closed.
- Prepared millions of pages of relevant documentation for inclusion in the electronic Licensing Support Network (LSN) and completed, for initial certification, the electronic LSN consistent with the requirements of 10 CFR Part 2, Subpart J, at least six months prior to submitting the license application.
- Completed a draft of the license application.

While we are concentrating on the technical issues that the NRC expects us to address for the license application, we are also considering issues raised by the Nuclear Waste Technical Review Board and other independent observers. For example, there has been discussion recently of a report by the Technical Review Board concerning the possibility of corrosion of the waste packages at the temperatures which will be reached in the repository. As we understand it, the Board's concern relates to the appropriate thermal operating conditions for our proposed repository design rather than to the ability to build a safe repository at the Yucca Mountain site at all. We are conducting a detailed evaluation of the Board's report, and plan to discuss the issue with the Board at their meeting in May.

We believe that our current design and proposed operating conditions would meet the radiation protection standards established by the Nuclear Regulatory Commission and the Environmental Protection Agency for a Yucca Mountain repository. We also believe that the licensing process will ensure that any issue that has significant potential for affecting safety will receive rigorous scrutiny. A repository will not be constructed, much less operated, unless such issues have been addressed to the Commission's satisfaction. Even after operation begins, the Commission's regulations require us to conduct a long term performance confirmation program to collect and analyze data to verify the bases for the repository license. We must also ensure that the waste can be retrieved from the repository if necessary for at least 50 years after emplacement begins, in the event that the results of performance confirmation indicate that changes are necessary. In fact, we are providing the capability to keep the repository open for at least 100 years, allowing plenty of time to improve our scientific understanding and deploy new technology as appropriate.

Before discussing our efforts to ensure that we will have a transportation system in place to move waste to the repository in 2010, I would like to address an issue concerning work at Yucca Mountain that has received considerable attention recently and about which we are taking decisive action. In September 2003, a former Yucca Mountain Project employee expressed concern about overexposure to silica and other potentially harmful substances during tunnel mining operations in the early to mid-1990s. Prior to the beginning of tunnel boring operations in 1994, safety programs were in place. Respiratory protection was made available to Yucca Mountain workers; however, between 1992 and 1996, requirements for its use were not consistently applied. In 1996, the Office of Civilian Radioactive Waste Management issued a stop work order, established a rigorous protection program, and enhanced monitoring of the work environment. Also in 1996, ventilation in the tunnel was improved to better control dust levels. Our records indicate that the requirements for the proper use of respiratory protection have been in effect since 1996 and have been rigorously enforced. We feel confident that the program is in full compliance and will provide safe conditions for its workers into the future.

To respond to the concern expressed by the former employee in 2003, in January 2004 we established the Silicosis Screening Program with the University of Cincinnati for current and former workers. This program provides medical screening that will detect any pulmonary changes. This program is free of charge to the workers. We have sent 2400 letters about this program to former and current workers, including a substantial number who did not work in the underground facility. We estimate that some 1200-1500 people have worked in the underground from 1992 to the present.

I should note that in 2000, two cases of silicosis were diagnosed through the ongoing medical surveillance program for current workers. Both of these individuals worked at Yucca Mountain during the tunneling operations and also had previous mining experience. In addition to implementing the screening program, we also have taken action to ensure that our current worker protection program is technically sound and fully implemented.

Let me turn now to our transportation activities related to Yucca Mountain, which were deferred for many years while the program focused on site characterization and the technical work supporting the license application. The acquisition of rail and truck casks; interactions with state, tribal, and local governments; and con-

struction of a rail line in Nevada are all critical for achieving waste acceptance goals in 2010.

We have taken some significant first steps. In November 2003 we published the *Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain: A Guide to Stakeholder Interaction*. The plan described how we will conduct an open and collaborative planning process involving states, tribes, and other interested parties as we develop and refine the transportation system. We have already begun working with State Regional Groups to identify the topics for future interaction and establish processes for working together. We anticipate a productive dialogue on issues that include the selection of transportation routes and modes, emergency response planning and training, safeguards and security, operational practices, communications and information access, worker protection, training, training standards, and qualifications.

Another important action that occurred at the end of last year was the identification of a preferred rail corridor for construction of a rail line in Nevada to connect an existing main line to the repository, should the Department choose mostly rail as the preferred mode of transportation. Five rail corridor options were identified in the Final Environmental Impact Statement (EIS), but none offered a clear environmental advantage. We looked at other factors, including views that had been expressed over the years, to identify our preferred corridor. The Caliente corridor appears to best assure the safe, secure, and timely transport capability, due to its remote location and lower likelihood of land use conflicts. In December, we identified the Caliente corridor as our preference, with the Carlin corridor as a secondary preference. We also initiated the process for withdrawal of federal land for the Nevada rail line within the preferred corridor.

In the Final EIS for the repository, the Department stated that mostly rail was the preferred mode of transportation, both nationally and in the State of Nevada. The mostly rail option would limit the number of shipments into Nevada to the repository site each year. A Record of Decision is pending on the mode of transportation and on the corridor for Nevada transportation if the mostly rail mode is selected. Following these actions, we would schedule public scoping hearings in Nevada and award a contract for an EIS for a specific alignment within the rail corridor, and a contract for conceptual design for the rail line.

We plan to focus on cask acquisition activities in FY 2005. We must begin the process now because cask design, certification, and fabrication take years to complete. We are also planning to undertake conceptual design for a fleet management facility that will support operations and maintenance of the cask fleet.

We believe that we can implement a transportation system that is safe and secure and merits public confidence, and we are committed to doing so. We are still at an early point in the process, but the collaborative approach we have established provides the framework for addressing stakeholder priorities and ensuring coordination with all interested parties.

Conclusion

In conclusion, in FY 2005 and beyond, the program will need significantly increased funding to pay for the design, construction, and operation of the repository, and the transportation infrastructure. The repository and the transportation projects are on the critical path to the program's goal of initiating waste receipt in 2010. If funds are available as needed, the program is well positioned to achieve the goal of beginning, in less than 7 years, to operate the world's first geologic repository for high level waste and used nuclear fuel.

Mr. HALL. All right. We are open for questions now. Mr. Card, as you know there are a couple of bills floating around out there to change the funding status of the Nuclear Waste Fund, and I hate to put you on the spot, because Representative Shimkus is here, and Chairman Barton is knowledgeable of this and aware of the hearing.

But which of these bills do you prefer? Are you in a position to make that statement; H.R. 3429 by Mr. Shimkus, or H.R. 3981 by Chairman Barton, and what do you think is necessary to reclassify the budget status of the Nuclear Waste Fund?

Mr. CARD. Well, first of all, I am glad that Representative Shimkus is here, because it gives me the opportunity to thank him for his leadership in moving forward on this issue last year.

And the administration is very appreciative of his efforts. In fact, if you look at our proposed bill, it is simply his bill with amendments. The bills, as you noted in your opening statement, are very similar. We have included what we think is a somewhat more robust term of coverage in the administration's proposal.

It also includes what we would view as some desirable administrative controls for the management of the funding. Both bills, let me just comment, in no way disempower the Congress from its oversight appropriations authority.

So obviously we submitted a bill that we would have a preference for, but we find ourselves strongly aligned with 3429 as well.

Mr. HALL. All right. Does the ranking member have questions? I recognize Mr. Boucher for 3 minutes. I'm sorry, 5 minutes.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman. And Secretary Card, I want to commend you on the concise nature of your testimony this morning. I wish more of our witnesses would follow your outstanding example, or members for that matter.

You mentioned in your testimony that the program would incur additional costs and delays if we do not legislatively correct the funding mechanism. Could you indicate what those costs and delays would be? Do you have any estimates with regard to either?

Mr. CARD. I think we have an estimate by Margaret of half-a-billion dollars per year of delay.

Ms. CHU. That is just for the defense side storage costs, and then I think from the industry side, it is probably comparable. So just the temporary storage costs will probably be close to a billion dollars a year not to mention the other costs because of the delay.

Mr. CARD. I might add then that if each site needs to go to dry storage or make some other structural change, then there would be step changes in that costs of delay as well.

Mr. BOUCHER. Okay. Can you give me an indication of the proportion of waste that would be deposited at Yucca Mountain that derives from the civilian program, as compared to the portion that is derived from defense origins?

Ms. CHU. The civilian waste is dictated by law. We are supposed to put in 70,000 metric tons of waste in Yucca Mountain. About 90 percent of it will be civilian waste, and 10 percent will be defense waste.

Mr. BOUCHER. Okay. Thank you very much. And you were indicating, Mr. Card, that the major element of costs that were derived from our failure to act legislatively at this point would actually be on the defense side, is that correct, or would there be additional costs on the civilian side as well?

Mr. CARD. Well, the costs as Margaret mentioned would be somewhat equally spent on the average between the two. However, with our accelerated clean up program on the defense side now, that may be done in 2025.

So we could be in a situation where the taxpayer, through the Department of Energy, will be having to pay to store high level waste at sites like Hanford, Washington, and Savannah River, until there is capacity there with repository storage, because that waste will now be produced much faster.

Mr. BOUCHER. Okay. The other question that I want to pursue with you is the rather modest nature of the proposal that has been

made by the administration, and I think the rather modest nature of the proposal that Mr. Shimkus, along with Mr. Rush, have also made.

Both the bills relate to assuring prospectively that monies that come into the fund, something on the order of \$770 million per annum, would in fact be dedicated to the purposes of the program.

They do not address the \$14 billion that is already on deposit in the fund, and would not receive the same level of assurance with regard to proper dedication for applications in the future. Are you troubled by the fact that the \$14 billion would not be addressed?

Do you not think that perhaps we ought to be a little bit more ambitious in what we do given the fact that we probably won't have that many opportunities to legislate corrective measures with regard to the fund?

I am personally a little bit concerned that we are leaving the \$14 billion unaddressed, and I would like to have your views regarding that.

Mr. CARD. Well, certainly our position on the \$14 billion is that its purpose is to be applied toward this effort. So we would be opposed to any other use of that money. In terms of the annual funding needs though, we believe that our proposal will provide for that.

However, what I would like to do is since you have expressed that interest privately as well, is to respond for the record on the administration's position on the precise number that we have put in the bill.

[The following was received for the record:]

We have not given up on the \$14 billion corpus of the Fund but do not need to tap the corpus at this time. Annual revenues together with the annual defense waste disposal fee will provide sufficient funding to license and construct the repository and put the necessary transportation infrastructure in place. The corpus, which cannot be spent for other purposes, will continue to generate interest and thus guarantee the ability of additional funds for appropriation at a later date.

Mr. BOUCHER. Well, I would appreciate that, and if in the course of that response if you could also very clearly state what guarantees we could anticipate if we do not act legislatively with regard to spending the \$14 billion for its intended purpose. I would not appreciate that as well.

So the picture is not encouraging, and that funding has been used for other purposes. DOE has been in a position of having to compete, or have all of its funding essentially compete one program to the other, including this program.

And it just occurs to me that while we have a chance for legislation, perhaps that could be a little bit more ambitious in doing so, and address the \$14 billion, as well as the prospective funding. Thank you very much, Mr. Chairman. That is all that I have.

Mr. HALL. Anyone else seek recognition at this time?

The Chairman recognizes Mr. Barton, the Chairman of the Commerce Committee.

Chairman BARTON. Mr. Chairman, thank you for recognizing me out of order, and I will be very brief. I have an opening statement to submit for the record, and I hope it will be accepted by unanimous consent.

Mr. HALL. Is there an objection? The Chair hears none, and the Chair recognizes Mr. Barton for 5 minutes.

Chairman BARTON. I just want to make two points, maybe three points. Obviously, we have worked to designate Yucca Mountain as the senior repository for high level nuclear waste for 15 or 20 years, and we finally got that designation on a bipartisan basis in both the House and the Senate.

So we have two items before us. No. 1, to make sure that the Department of Energy submits the license application on time in December of this year, which is not that far off.

And, No. 2, that we find a way to use the Nuclear Waste Fund, which has \$14 billion in it, to actually spend it for what it was intended, which is to build and maintain this repository. So I hope that this subcommittee asks the appropriate questions.

My question would be, Mr. Card, and it may have already been asked, but what is the probability of actually having an application to the NRC on time this December?

Mr. CARD. We feel confident that we can provide them the application on our promised date of December 2004.

Chairman BARTON. And is that a universally held opinion in the department, or is that your opinion because you know that is what I want to hear?

Mr. CARD. It would be my strong personal opinion, but I believe it is universally held as well.

Chairman BARTON. Okay. Second, on the piece of legislation that we introduced last week to fund construction and maintenance of the repository, is it your view that the Bush Administration is going to strongly support that, moderately support that, accept it if it passes, or something even less than that?

Mr. CARD. Could you restate—

Chairman BARTON. We introduced a piece of legislation in the House taking the Nuclear Waste Fund off-budget so that we could use it for what it was intended. We only did that last week, and I understand that sometimes news does not travel very quickly from getting it that way.

Mr. CARD. You can count on our strong support of that bill.

Chairman BARTON. Thank you, Mr. Chairman.

Mr. HALL. I thank the Chairman, and the Chairman recognizes Mr. Markey for 5 minutes.

Mr. MARKEY. Thank you, Mr. Chairman, very much. This morning we are having a hearing on the legislative proposals to take the Nuclear Waste Fund off-budget, but this afternoon on the House floor, we will be voting on the Republican budget, which fails to include a proposal to take it off-budget.

But I will be voting against that budget on the House floor this afternoon, and all the Republicans who really want any part of that budget this afternoon, just so you can understand the position of this hearing with what is actually going to happen on the House floor today with the Republican budget on that issue.

It is my understanding—Mr. Card, any relation?

Mr. CARD. To?

Mr. MARKEY. Andy.

Mr. CARD. No.

Mr. MARKEY. It is my understanding that DOE will issue its decision on the preferred mode of transportation for the nuclear waste going to Yucca Mountain sometime in the next month, and that it most likely will be a rail decision.

The tragedy in Spain has illustrated how vulnerable our rail system is to terrorist attack. What additional security measures will be needed to address this threat since you have studied the Spain incident?

Mr. CARD. Well, not knowing everything about the Spain incident, it is not clear to us that any additional measures beyond what was contemplated may be needed to respond to that specific incident.

Obviously the Department of Energy, and I am assuming the NRC, are very concerned about the attacks on trains, and we believe that we have a waste shipping system, and we have a very robust system in place now, and that whatever is required to make it—

Mr. MARKEY. Well, do you have a study in progress to examine the lessons of Madrid?

Mr. CARD. Not that specific, except that the environmental impact statement and other works contain numerous studies of not only explosives, but projectiles, and—

Mr. MARKEY. I urge you, Mr. Card, to take the Spain incident, and take the level of threat that was created in that country, and to then closely examine it in terms of the lessons that you can learn for transporting nuclear waste across our country.

I don't think that you should assume that you have already answered all those questions. I think your agency is making a mistake in assuming that everything that you have done up until now would protect against an al-Qaida like attack like we saw in Madrid. You are making a big mistake if you make that assumption.

When does DOE plan to begin financially assisting individually impacted States in the transportation emergency preparedness as required by Section 180(c) of the Nuclear Waste Policy Act?

Mr. CARD. About 6 months ago when we finally received the funding this year thanks to the appropriators, we kicked off our transportation program and now have fully engaged State and regional organizations and are providing them funding.

They, I believe—and Dr. Chu may want to comment on this—are in the process now of advising us on the approach that they would like to take for support and route selection, and just as we did with the waste isolation pilot project on transportation, we would expect to be providing them support.

Mr. MARKEY. Is there any truth that the Department of Energy is going to use barges as a way of transporting nuclear waste?

Mr. CARD. We don't know that yet.

Mr. MARKEY. Is that under consideration that you would use barges?

Mr. CARD. The Secretary has said that we will consider all modes of transportation and make the final decision in collaboration with State and local government.

Mr. MARKEY. So are heavy trucks still under consideration, too, as a way of moving nuclear waste?

Mr. CARD. There is no transportation system that I am aware of that is safe that we have ruled out at this time, although we have expressed a preference at this point.

Mr. MARKEY. And you consider barges to be safe?

Mr. CARD. We don't consider them to be unsafe.

Mr. MARKEY. The Association of American Railroads has long contended that spent fuel should only be shipped in so-called special trains, dedicated trains, hauling only spent fuel and other radioactive materials, and operating under special safety protocols, such as speed restrictions, buffer car specifications, and train passenger rules.

However, the current Department of Transportation regulations allow the shipment of spent fuel in general mixed freight trains. What is the Department of Energy's position on dedicated trains, versus mixed freight trains?

Mr. CARD. We have not yet made a decision on that, but we have expressed a preference to keep trains segregated.

Mr. MARKEY. That is your preference? And you have stated that to them?

Mr. CARD. We have not made a decision on that.

Mr. MARKEY. You have not made a decision?

Mr. CARD. That is right.

Mr. MARKEY. I would urge you to make a decision. It is very important for you to move forward only after you have completely investigated those important issues. In October 2003, researchers with the NRC informed the NRC's advisory committee on nuclear waste that tunnels leading inside Yucca Mountain to the repository could degrade and fill with rubble within several hundred years of the repository's construction.

While the material stored in the repository will be weakly radioactive for hundreds of thousands of years, it is possible that access to the tunnel could be nearly non-existent within several hundred years.

The NRC scientists responsible for reaching this finding questioned the DOE's methodology for determining the availability of the tunnels. How does the DOE respond to those findings?

Mr. CARD. Tunnel integrity over the long term is only important in that it not damage the engineered container, and they have been designed to deal with that.

Mr. MARKEY. So you are saying the fact that you won't have access to it any longer, and as long as you determine that the container will be secure, then that is no longer an issue as far as you are concerned?

Mr. CARD. Once the repository is closed, which we said could be as long as 300 years from now, the condition of the tunnels at that point is only a consideration to ensure that we properly analyze if rocks fall on the containers, which we have.

Mr. MARKEY. Well, I think that you need to do more work on that. I don't think that we can pass on like an intergenerational punt the responsibility for them to figure out how to deal with it, and I think it is our responsibility in this generation to figure out how to keep that open.

Mr. CARD. I would just say that there has been no decision made that would prohibit the indefinite repository opening and not clos-

ing it. So that is a decision that future generations will be able to make. Nothing in our design compromises that.

Mr. MARKEY. Thank you, Mr. Chairman.

Mr. HALL. The gentleman's time has expired. Who seeks recognition? Mr. Norwood is recognized for 5 minutes.

Mr. NORWOOD. Thank you very much, Mr. Chairman. My questions could be answered by either of you. This transportation question keeps cropping up just a little bit, and do we move any nuclear waste today by barge?

Mr. CARD. The answer is that I don't know if you could term it barge. If you say over the water, the answer is yes. And in fact a number of reactor cores, I believe, have been moved to South Carolina and fuel, and reactor parts to Washington State.

Mr. NORWOOD. And are we moving nuclear material by truck today?

Mr. CARD. Large quantities of it.

Mr. NORWOOD. And how about trains?

Mr. CARD. Yes.

Mr. NORWOOD. Have we had any major accidents in the last 40 years that we have been moving nuclear material?

Mr. CARD. There have been no accidents that have resulted in a significant release of nuclear materials.

Mr. NORWOOD. In other words, I guess I hear you saying that, yes, you can blow up the train, and you can blow up the track, and the train may turn over, but that doesn't necessarily mean there is going to be a release of nuclear material?

Mr. CARD. The cask testing is rigorous. They are dropped from a considerable height. They are ignited in 1,450 degrees for 30 minutes, and they still have to be leak proof after that.

So I want to clarify one of the previous witnesses, who said that our EIS said there would be 300 accidents. Those are not nuclear accidents. Those are normal highway accidents, and our experience is that they are mostly caused by other drivers running into our equipment.

Those are of course—it may be less with the rail option that we selected as our preferred method.

Mr. NORWOOD. And I understood that to be what that study meant. I was amazed that the witness did not point out the rest of it. Yes, we are going to have some accidents, but that is different from releasing nuclear material.

One last question, Mr. Chairman. MOX fuel, are you familiar—I know that you are familiar with that. Where are we with that, and as soon as we get ourselves into position to produce MOX fuel, such as France and Britain here today, how does that change—and I am not sure that I know the right words. Should I say tons of volume, but the tons of nuclear waste that would be stored at Yucca Mountain?

Mr. CARD. Well, I will first go in reverse order, and Dr. Chu, if you have any other comment, hop in, but I don't believe it changes it at all because you still have the same reactor loading essentially with the MOX fuel as you would without it.

Ms. CHU. I agree.

Mr. CARD. So it just displaces uranium. In terms of the overall—I assume your first question was on the overall program.

Mr. NORWOOD. Well, let me interrupt, please, because I don't understand that. If we reduce nuclear waste in converting to MOX fuel, there has got to be a smaller amount of nuclear waste when you finish reducing it into additional fuel that we burn up.

Mr. CARD. I'm sorry, I was referring—I thought you were referring to only the power side of that equation. It will substantially reduce the defense waste component to Yucca Mountain.

Mr. NORWOOD. So as opposed to some of the testimony that we heard earlier, yes, this has been in the planning stages and operational stages way too long in my opinion, but we have been looking at ways to reduce—is it volume or tons should I say?

Mr. CARD. Well, both.

Mr. NORWOOD. Well, reduce the volume that we are going to send out to Yucca Mountain. So it is not like all of this was just thought up 20 years ago, and nothing has been done in the interim. There has been many steps taken in the interim I think to make this a more palatable decision.

Now, having said that, I think Mr. Gibbons won't feel comfortable with this discussion until we are able to say to him at what point in time will we begin to be able to reduce the volume by building a MOX fuel plant. Where are we with that?

Mr. CARD. In terms of a MOX plant construction, which I assume you are asking.

Mr. NORWOOD. I am.

Mr. CARD. We are all ready to go on our side of the ocean on that, but what we are waiting for right now is for the Russian component to catch up with us. So we just announced about a 1-year delay in the program, hoping that we are able to resolve some liability issues for the contractors that would be working from the U.S. in Russia.

And we are optimistic that may be resolved, but we have had a commitment all along that we will go as fast as we can with that project, but no faster than the Russian side.

Mr. NORWOOD. Can I be comfortable in thinking that we are going to get there. It is just taking as usual a little longer than we would like?

Mr. CARD. We are committed.

Mr. NORWOOD. Mr. Chairman, just an observation. Earlier witnesses were talking about lying down in front of train tracks so we can't send nuclear waste out to Yucca Mountain. And I can't wait to get to the floor to tell my good friend, Jim Gibbons, who is my good friend, that the last fellow that did that, threatened to lie down in the road in South Carolina to move nuclear waste, was soundly defeated for Governor the next time he ran.

And I don't want Jim to get defeated for lying down in the road somewhere, and so that is not necessarily a good plan. Thank you, Mr. Chairman.

Mr. HALL. We don't want Jim to expire, but your time has expired. The Chair has time to recognize Mr. Shimkus, and then we will have a series of several roll call votes, but we will excuse this panel if that is agreeable. The Chair recognizes Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman, and some of these questions can be answered probably pretty quick. Do you agree

that confidence in the Department's ability to meet program goals could be improved if funding were predictable and enhanced?

Mr. CARD. No question.

Mr. SHIMKUS. What are you doing to ensure that the repository will be able to receive waste by 2010?

Mr. CARD. Well, we are engaged in the first critical step, which is getting a license application submitted in December. That license application actually contains a substantial start on the concept thinking for the design of the repository. We have—

Mr. SHIMKUS. And funding is important?

Mr. CARD. Funding is critical.

Mr. SHIMKUS. If we are going to meet the 2010, we really need to get a consistent, reliable, funding stream for this; is that appropriate?

Mr. CARD. That's correct.

Mr. SHIMKUS. Can you briefly—and we do want to make sure that we get our Chairman over in time to cast votes and myself, but can you give me an example of something that has been delayed because of the funding problem?

Mr. CARD. Well, transportation, which has been talked about here as an example, we are almost 2 years late on our start on transportation, because we have made it clear that we have to fund the license application first.

So unfortunately some of the things that are most important to our stakeholders, which are advanced science and transportation have not been funded over the last 2 years because of the funding shortfall.

Mr. SHIMKUS. Well, my good friend, Mr. Markey, and I hate to talk about him when he is not in the room, but if you are so concerned about transportation, he would be very supportive of my piece of legislation.

He would want more funding if you wanted transportation. I will remind him of that on the floor when I get a chance. I will yield back.

Mr. HALL. All right. We have got about 8 minutes left. Mr. Otter, would you like to be recognized? The Chair recognizes Mr. Otter.

Mr. OTTER. Thank you, Mr. Chairman. My question is going to go primarily to—I heard in your earlier testimony, Mr. Card, that you are very supportive of both of the bills that we have under consideration.

And obviously one of the reasons that we have these under consideration is so that there is some continuity to the financing of our nuclear waste problem. Does that also include research and development?

Mr. CARD. Well, research and development is within the budget, and to the extent that we have the funding that we asked for, we have a commitment for an ongoing science program at Yucca Mountain, and also to deal with the technologies for transportation of any nuclear waste.

So we fund our commitments to the NRC and the license application first, and then we fund those other things to the extent that we get the full President's request.

Mr. OTTER. Well, what I wanted to get to, Mr. Card, was the importance of the continuity of funding, and how important that is to

sustain a program, and to get the kind of people into those programs that are going to be able to make the contributions, and get the expertise that you need.

If we have to come back and have these silly little fights every year in order to have a program that is as serious as what some would suggest here, and I believe that it is, that this is serious stuff, that obviously it needs to have some sort of funding stream that can be counted on so that once again you can get the kind of expertise.

What I noticed was that there is a proposal in the administration budget to request moving the spent fuel from the Environmental Management Program to the Radioactive Waste Program.

And the reason that I want you to talk a little about that is because it appears to me in the review of that that the funding is only for 1 year, and that is 2005. So I agree with you; funding is important for the development of the repository for this stuff.

But it is also important, as I think you learned yesterday in the Subcommittee on Appropriations on Energy and Water, that if we don't have ongoing research and development on reprocessing and that sort of thing, that we have got to get to work on another Yucca Mountain, because we are going to be producing the kind of waste that is going to fill that up pretty fast if we don't have ongoing funding.

So my question is how do you—there is a question in here, and be patient with me. And that question is I agree with you that continuity in a program is important for the success of the program to attract the kind of talent that we need.

If it is so important in establishing the waste program, why isn't it equally as important, and then why is that not reflected in the administration's policy on funding the lab, and on funding the reprocessing potential for R&D?

Mr. CARD. Yes, I can respond to that. First of all, let me just be clear. When we transferred the budget for fiscal year 2005 into Dr. Chu's operations for the Idaho spent fuel, we also were transferring all the out-year targets as well.

Plus, the restrictions that are in place with the Nuclear Waste Policy Act would prohibit us from trying to fund the Idaho work through the funds that we are talking about today. I think that your question points directly at the administration's proposal for the advanced fuel cycle work for this year, both for fiscal year 2005.

Frankly that came down to two issues. One is that one of the processes that we are interested in, we concluded was not as desirable as we thought, and so there is some retooling going on.

Second, in looking at funding for critical needs for the transition at the Idaho lab and other budget issues, we concluded that for the overall thrust of what we needed to get done in the nuclear area that that was somewhat less important than others.

And you will notice that we did bump up the generation for reactor, which we felt was a more right-now substantive project that deserved more priority in a constrained environment.

Mr. OTTER. Okay. I would just use the balance of my time to reflect that I think—and I am a supporter of ongoing funding so that there is some certainly, because I can see what happens to industry whether if in the future.

And I look at the University of Idaho today, which I think has some tremendous opportunities, yet not one person goes into mining in Idaho because we can't mine our lands in Idaho. Not one person goes into forestry anymore in Idaho, where we have the pre-eminent university having to do with silver cultural and force management, because there is no future in it.

If you are not going to cut a log, there is no sense in studying it. With that, thank you, Mr. Chairman, I yield back.

Mr. HALL. Mr. Otter yields back his time, and at this time we thank you, Dr. Chu, and thank you, Bob Card, for a job well done. You are excused. We will recess for a vote on the floor. We will resume this hearing at 11:45.

[Brief recess.]

Mr. HALL. We are convened. The Chair is pleased to announce the third panel, the Honorable Nils J. Diaz, who is the Acting Chairman, U.S. Nuclear Regulatory Commission; and Dr. David Duquette, who is a U.S. Nuclear Waste Technical Review Board Member.

We are honored to have both of you, and at this time, we recognize you, Mr. Chairman, for 5 minutes, or for as long as it takes for you to make your presentation.

STATEMENTS OF HON. NILS J. DIAZ, CHAIRMAN, U.S. NUCLEAR REGULATORY COMMISSION; AND DAVID J. DUQUETTE, U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

Mr. DIAZ. Thank you, Mr. Chairman, and members of the subcommittee. On behalf of the United States Nuclear Regulatory Commission, I am very pleased to join you today to discuss the NRC's regulatory oversight in the national program for management and disposal of high-level radioactive waste and spent nuclear fuel.

I have submitted a full statement for the record, and respectfully request that it be included in the record. The Commission continues to believe that the long-term success of the national program to secure spent nuclear fuel and other high level radioactive waste requires a permanent disposal solution, and that a geologic repository can provide an appropriate need for the United States to secure these wastes in a safe manner.

We also believe that public health and safety, the environment, and the common defense and security can be protected by deep underground permanent disposal of these wastes.

However, the Commission takes no position at this time on whether the construction of a repository at Yucca Mountain, Nevada, should be authorized.

Our views on that question will be shaped by the results of the Congressionally mandated licensing process. I can assure you that the NRC licensing process is based on sound technical evaluations and due legal process.

I would emphasize that the use of wet and dry storage technologies for spent fuel continues to be safe, and its use will continue to provide adequate assurance of public health and safety until such time that the permanent disposal solution is available.

The Department of Energy has stated that it intends to submit a repository license application to the NRC in December of this

year. Several important steps must occur before the Commission can decide whether to authorize the construction of a repository at Yucca Mountain.

First and foremost the DOE application must be complete and of high quality. Second, the NRC will determine to what extent it can adopt DOE's environmental impact statement.

Third, if the NRC determines that the application is acceptable for further review, the NRC staff will conduct a detailed safety review, and issue a publicly available safety evaluation report with its review findings.

And, fourth, the NRC must conduct a full and fair public hearing on the application prior to reaching a decision on whether to authorize construction of the repository, which would be based on the information before us at that time.

For the present, we are preparing for the potential transition from the pre-licensing role to the role of licensing authority to ensure that we are prepared to carry out our responsibilities should DOE submit their license application.

In this regard, we issued final radiation standards specific to Yucca Mountain that are consistent with those of the Environmental Protection Agency. We developed licensing guidance for use by the staff in reviewing the application, and we continue our pre-license application interactions with the DOE on many program areas.

We are developing the inspection and enforcement programs that would be in effect if the license application is accepted for review, and finally we have recently reorganized our staff to create a new organization dedicated solely to addressing the full scope of licensing activities associated with the review of a repository application.

As the subcommittee knows, Federal regulation of spent fuel transportation safety is shared by the U.S. Department of Transportation and the NRC. DOT regulates the transport of all hazardous materials, including spent fuel and has established regulations for shippers and carriers.

For a start, the NRC established design standards for the transportation casks, and reviews and certifies cask designs prior to their use. Further, cask design, fabrication, use, and maintenance activities must be conducted under an NRC approved quality assurance program.

For spent fuel shipments the NRC also conducts an inspection and enforcement program and reviews and approves physical security plans. Also, the Nuclear Waste Policy Act requires DOE to utilize NRC-certified casks for spent fuel shipments to a repository.

It requires them to follow the NRC's advanced notification requirements and to provide emergency response training along shipment routes. The NRC believes that the current transportation regulatory system provides safe protection to the public and is well established.

Mr. Chairman, I believe this statement makes clear that we have executed our responsibilities under the Nuclear Waste Policy Act, and we take our continuing role very seriously. Thank you for the opportunity to testify today, and of course I will be pleased to take any questions.

[The prepared statement of Nils J. Diaz follows:]

PREPARED STATEMENT OF NILS J. DIAZ, CHAIRMAN, U.S. NUCLEAR REGULATORY COMMISSION

Mr. Chairman, members of the Committee, I am pleased to join you to testify on behalf of the Nuclear Regulatory Commission (NRC) concerning the NRC's regulatory oversight role in the U.S. program for management and disposal of high-level radioactive waste and spent nuclear fuel.

The Commission continues to believe that the long-term success of the national program to secure spent fuel and other high-level radioactive waste requires a permanent disposal solution, and that a geologic repository can provide the appropriate means for the United States to secure these wastes in a safe manner. We also believe that public health and safety, the environment, and the common defense and security can be protected by deep underground disposal of these wastes. However, the Commission takes no position at this time on whether construction of a repository at Yucca Mountain, Nevada, should be authorized. In the interim, the NRC considers the available technologies for wet and dry storage of spent fuel at reactor sites to be safe, and their use will continue to provide adequate assurance of public health and safety until such time that a permanent disposal solution is available. Both wet and dry storage provide adequate storage for decades but they are not suitable for disposal.

The Nuclear Waste Policy Act of 1982 and the Energy Policy Act of 1992 provide that the NRC is to serve as an independent regulator to ensure that any licensed geologic repository adequately protects the public health and safety, the environment and common defense and security. I am pleased to state that the NRC has consistently met its obligations established by these Acts. We are now in the midst of preparations for an important transition—from the pre-licensing role to the role of licensing authority.

THE PRESIDENT'S RECOMMENDATION

As you know, in July 2002, Congress approved the President's site recommendation and the Department of Energy (DOE) was authorized to submit to the NRC a license application for a repository at Yucca Mountain, Nevada. When DOE does so, several important steps must be taken before the Commission can decide whether to authorize construction of a potential repository at Yucca Mountain. First, DOE must submit a complete, high-quality license application. Second, the NRC staff will determine to what extent, if any, it can adopt DOE's Environmental Impact Statement (EIS). To the extent the NRC cannot adopt the EIS, it would need to be supplemented. Third, NRC staff must conduct an independent safety review to determine whether or not the DOE proposal to design and construct a repository meets NRC's regulatory requirements. The results of this review will be documented in a safety evaluation report that would be made available to the public. Fourth, the NRC will conduct a full and fair public hearing prior to reaching a decision on whether to authorize construction of the repository. The Commission determination on whether the DOE license application meets regulatory requirements will be based on the entire record, including a review of the record of the issues contested in the NRC hearing process, as well as the uncontested issues pertaining to findings necessary to issue a construction authorization.

The Nuclear Waste Policy Act gives NRC the responsibility to establish licensing criteria for a potential repository, to provide our preliminary views on the sufficiency of certain DOE information collected during site characterization, and to comment, along with other federal agencies, on the EIS prepared by DOE for Yucca Mountain. The Act also requires the Commission to be prepared to make a fair, informed, and timely licensing decision. The Commission takes these obligations seriously and I will discuss each of them in turn.

THE REGULATORY FRAMEWORK

Under the Energy Policy Act of 1992, the Environmental Protection Agency (EPA) was directed to establish radiation dose-based environmental standards for Yucca Mountain. The NRC was directed to modify its technical requirements and criteria for the repository to be consistent with any final EPA standards issued. We have done that.

EPA issued its final standards in June 2001. In November 2001, after carefully considering and analyzing the public comments received on our proposed criteria, the NRC promulgated final health and safety regulations that will guide our licensing decision on Yucca Mountain. As required by law, our regulations are consistent with the health and safety standards established by the EPA. We are confident that a repository at Yucca Mountain, that can be shown by DOE to comply with these

demanding standards and regulations, will provide reasonable assurance that there is no unacceptable risk to the environment or health and safety of the public today and in the future.

The EPA and NRC regulations are being challenged in the Federal courts. We expect a Court ruling later this year.

NRC PREPARATIONS FOR LICENSING

As part of our overall pre-licensing strategy, we continue to hire staff with the knowledge, skills, and abilities needed to review a license application. We have also recently created a new organization dedicated solely to addressing the full scope of licensing activities associated with review of a DOE repository application. We have developed guidance to help focus the review on the issues most relevant to repository performance. Our staff has applied the experience gained in the reviews of DOE documents and pre-licensing interactions to the preparation of a Yucca Mountain Review Plan, which was published in final in July 2003. The Yucca Mountain Review Plan, which is available on our website, will guide the NRC's review of any DOE license application for the repository. Also, the staff is in the early stages of developing the inspection and enforcement programs that would be in effect if the license application is accepted for a detailed review.

In addition, our Atomic Safety and Licensing Board Panel is actively engaged in developing the infrastructure, including automation tools, for addressing the repository licensing hearing schedule set out in the Nuclear Waste Policy Act. We have developed an Internetbased Licensing Support Network (LSN) to provide a document discovery database to make the hearing process more efficient. Currently, the LSN provides electronic access to over 15,000 documents out of the anticipated millions of such pages that are likely to comprise the document discovery database when such documents are made available to the LSN by the parties and potential parties to the licensing proceeding through the LSN. Further, working with the General Services Administration, NRC awarded a contract for a hearing room facility in the Las Vegas area that should be operational by May 2005, in time for the start of hearings.

DOE'S COLLECTION OF INFORMATION

Over many years, NRC has performed reviews of DOE program documents and preapplication technical material and held extensive pre-licensing interactions with DOE staff and various stakeholders, including the State of Nevada, affected units of local government, Indian Tribes, representatives of the nuclear industry, and interested members of the public. The DOE and the NRC staff have reached and documented numerous agreements regarding additional information that will be needed for a licensing review. Approximately two-thirds of these agreements call for DOE to provide information that is sufficient for the staff to undertake a detailed technical review of the DOE application. The remainder obliges DOE to perform specific tests or analyses, to document prior tests or studies, or to provide other information. DOE continues to address these agreements and the NRC staff continues to review the results promptly and notify DOE of its findings. Addressing these agreements increases the likelihood that DOE can assemble the information necessary for an application that NRC can accept for review. Last May, the staff provided DOE information on how NRC staff ranked the agreements in accordance with their importance to repository safety. The staff continues to use similar information and insights to focus its technical review and licensing and inspection programs on those areas most important to repository safety. NRC has made, and will continue to make, information on its regulatory program publicly available, and expects to have continued dialogue with DOE and other stakeholders on these matters.

It is important to note that the NRC staff is also focusing on the quality of DOE documentation that would support a license application for Yucca Mountain. Over the course of its pre-licensing interactions, the staff has had ongoing discussions with DOE on its implementation of a quality assurance program and the quality of the data, models and software that DOE will rely on to support a license application. In a May 29, 2003, letter to NRC, the DOE committed to ensure that improvement initiatives in its quality assurance program will be fully and effectively implemented. Quality management remains a challenging program area for DOE, one which the NRC staff continues to monitor.

DOE'S FINAL ENVIRONMENT IMPACT STATEMENT

As required by the Nuclear Waste Policy Act, Secretary Abraham included a final EIS with his recommendation to the President along with the comments other agencies including those of NRC provided on the final EIS. Our comments were devel-

oped on the basis of reviews of DOE's draft EIS for Yucca Mountain, the supplement to the draft EIS and the final EIS. Our reviews were informed by the NRC staff's extensive precertification interactions with DOE, the State of Nevada, affected units of local government, Indian Tribes, representatives of the nuclear industry, and interested members of the public. The analyses provided in the EIS appear to bound appropriately the range of environmental impacts. We expect that DOE's current efforts to refine the repository design and define transportation modes and routes will allow for more precise estimates of impacts. In this regard, DOE announced that if it selects a rail corridor, it will issue a Notice of Intent to initiate preparation of a rail alignment EIS. The outcome of such reviews will help inform an NRC determination regarding to what extent the EIS can be adopted, in connection with issuance of a construction authorization or license, as required by the Nuclear Waste Policy Act. NRC continues to interact with DOE and other interested stakeholders to consider and address outstanding technical and environmental issues, as needed.

SAFETY AND SECURITY OF SPENT FUEL TRANSPORTATION

The Commission believes that the spent fuel and high-level radioactive waste stored at multiple sites can be safely and securely transported to a single location for geologic disposal.

Responsibility for Federal regulation of spent fuel transportation safety is shared by the U.S. Department of Transportation (DOT) and the NRC. DOT regulates the transport of all hazardous materials, including spent fuel, and has established regulations for shippers and carriers regarding radiological controls, hazard communication, training, and other aspects. For its part, NRC establishes design standards for the casks used to transport licensed spent fuel, and reviews and certifies cask designs prior to their use. Further, cask design, fabrication, use and maintenance activities must be conducted under an NRC-approved quality assurance program. In addition, NRC periodically inspects cask vendors and has enforcement authority over such licensed activities.

NRC does not have authority to regulate shipments made by DOE. For spent fuel shipments made by commercial shippers, over which NRC has regulatory authority, NRC reviews and approves physical security plans. These plans provide information on how shippers and carriers comply with NRC spent fuel shipment protection requirements, including advance notification of each shipment to the appropriate State Governor's designee, the establishment of redundant communication capability with the shipment vehicle, the arrangement of law enforcement contacts along the route, and provision of shipment escorts.

The Nuclear Waste Policy Act requires DOE to utilize NRC-certified casks for spent fuel shipments to a repository, follow NRC's advance notification requirements, and provide emergency response training along shipment routes. NRC has reviewed and certified a number of package designs that could be used for transport of spent fuel to a repository, and is ready to review any new design that may be proposed by DOE.

The NRC believes the safety measures provided by the current transportation regulatory system are well established. Nonetheless, we continue to examine the safety of the transportation program. In FY 2000, NRC re-evaluated its generic assessment of spent fuel transportation risks to account for the fuel, cask, and shipment characteristics likely to be encountered in future repository shipping campaigns. The NRC also began development of the Package Performance Study to conduct confirmatory research to demonstrate the robustness of full-scale spent nuclear fuel transportation casks using an enhanced public participation process. The confirmatory research will involve testing the integrity of a full-scale transportation rail cask and validating the scaling methodology used in cask design and transportation risk assessment analyses. NRC is also supporting a study by the National Academies' Board on Radioactive Waste Management that is examining radioactive material transportation, with a primary focus on spent fuel transport safety. As a part of its evaluation, the NRC staff has analyzed appropriate national transportation accidents, such as the 2001 train tunnel fire in Baltimore, Maryland. For example, the staff analyzed a currently approved spent fuel transportation cask design, under thermal conditions similar to those experienced during the Baltimore tunnel fire, and concluded that there would be no release of radioactive material from such an event. Our reevaluation of generic assessments of spent fuel transportation risks, the significant history of safe shipments, the rigor of our pre-certification design reviews, and our inspections provide confidence that spent fuel can be shipped safely today and in the future. We are committed to continue to work with our stakeholders openly to increase public confidence in the NRC regulatory process. Finally,

NRC is sponsoring a study to update its evaluation of cask response to acts of sabotage and will utilize the results of these studies as input to its overall assessment of the safety of cask design and transportation risks. Results to date show that a large commercial aircraft crashing into a transportation cask would not result in release of radioactive material.

CONCLUSION

The Commission believes that deep geologic disposal is appropriate for high-level radioactive wastes and spent fuel and that such wastes can be safely and securely transported to a disposal location. However, the Commission takes no position at this time on whether construction of a repository at Yucca Mountain, Nevada, should be authorized. NRC's role is to ensure that a regulatory program is in place that adequately protects public health and safety, the environment and common defense and security, and to review and evaluate any license application submitted to determine compliance with regulatory requirements. As I believe this statement makes clear, we take that obligation very seriously and we are ready to fulfill our statutory role.

I will be pleased to answer any questions you may have.

Mr. HALL. Mr. Chairman, thank you very much.

The Chair recognizes you, Dr. Duquette.

STATEMENT OF DAVID J. DUQUETTE

Mr. DUQUETTE. Thank you, Mr. Chairman. As you indicated, my name is David Duquette, and I chair the U.S. Nuclear Waste Technical Review Board Executive Committee. All members of the Board are appointed by the President, and serve on a part-time basis.

In my own case, I am the department head and professor of materials science and engineering at Rensselaer Polytechnic Institute. I am pleased to be here today to present the Board's comments and with your permission, Mr. Chairman, I will make a very brief oral statement, and request that my full statement be included in the hearing record.

Mr. HALL. Without objection.

Mr. DUQUETTE. As you know, Congress created the Board in the 1987 amendments to the Nuclear Waste Policy Act. The Board reviews the technical and scientific validity of the Department of Energy's activities related to the disposal, transportation, and packaging of commercial spent nuclear fuel and defense high-level nuclear waste.

Since Congress approved the site recommendation for Yucca Mountain in 2002, the Board has continued its review of DOE technical and scientific efforts, with emphasis on DOE's plans for transporting waste and constructing and operating a repository.

Today, I will not comment on one of the hearing topics, alterations in the Nuclear Waste Fund. That issue is outside our purview. I will comment on the other topic of the hearing, a review of the Yucca Mountain program. I will confine my short statement to three examples of scientific issues that the Board has addressed since we last testified before this subcommittee.

Other examples of the Board's work during the last year or so are included in my written testimony and I will begin by discussing the engineered barriers of the repository. At Yucca Mountain, about 15,000 waste packages will be used to dispose of spent nuclear fuel and high-level radioactive waste.

The waste packages are important elements of the engineered part of the repository system. Based on the Board's review of infor-

mation presented in the last year by the DOE and the Nuclear Regulatory Commission's Center for Nuclear Waste Regulatory Analysis, the Board believes that all of the conditions necessary for localized corrosion of the waste packages will likely be present during the first several hundred years after repository closure.

During that time waste package temperatures will be well above boiling in the DOE's current repository design. Once initiated, localized corrosion will likely propagate rapidly even at lower temperatures, resulting in a possible release of radionuclides.

From a technical perspective in the Board's opinion the problems related to localized corrosion could be avoided if the DOE's current repository design and operation were modified to keep the waste package surface temperatures below boiling.

Contrary to the Board's views, the DOE apparently believes that high-temperature conditions in its repository tunnels will not lead to significant corrosion. We will have a major meeting on this issue with the Department of Energy and other interested parties at an upcoming Board meeting on May 18 and 19 here in Washington.

We look forward to an open and thorough exchange of views at that meeting. The second issue that I would like to introduce involves the natural barriers of Yucca Mountain. Hydrogeological features potentially can act as natural barriers for the migration of radioactivity from a repository.

At a Board panel meeting held just 2 weeks ago the Department of Energy presented a variety of data indicating that natural barriers at Yucca Mountain might isolate waste for several thousand years, possibly even longer for some radionuclides.

The Board believes that the natural barriers are very important and that addressing uncertainties associated with specific aspects of the natural system can enhance confidence in predictions of the performance of geological barriers.

Finally, I would like to comment briefly on transportation and other waste management activities. Over the last year the Department of Energy has expanded significantly its activities related to the transportation of radioactive waste and the design and operation of surface and underground facilities at the planned repository.

Consequently, the Board's involvement in these important areas also has increased substantially. Several Board recommendations to the Department of Energy have evolved in the last year from Board meetings on transportation.

For example, the Board believes that the Department of Energy should systematically analyze and schedule all transportation activities, should conduct an inventory of needed infrastructure, and definitely should consider security planning needs.

Mr. Chairman, these are just a few examples of issues that have been the focus of the Board's work over the last 2 years. The Board will continue its technical and scientific review, and will make recommendations that it believes will improve the technical validity of the DOE's transportation and repository-development activities. Thank you for this opportunity to present our views.

[The prepared statement of David J. Duquette follows:]

PREPARED STATEMENT OF DAVID J. DUQUETTE, U.S. NUCLEAR WASTE TECHNICAL

Good morning, Mr. Chairman and members of the Subcommittee. I am David Duquette, and I chair the U.S. Nuclear Waste Technical Review Board's executive committee. All members of the Board are appointed by the President and serve on a part-time basis. I am Department Head and Professor of Materials Science and Engineering at Rensselaer Polytechnic Institute.

I am pleased to be here today to present the Board's comments on technical and scientific issues that continue to be of interest related to the proposed repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain in Nevada. We hope that the Subcommittee will find the Board's testimony useful in its oversight of activities related to a Yucca Mountain repository. With your permission, Mr. Chairman, I will make a brief oral statement, and I request that my full statement be included in the hearing record.

Background

As you may know, Mr. Chairman, Congress created the Board in the 1987 amendments to the Nuclear Waste Policy Act. Congress charged the Board with performing an ongoing independent evaluation of the technical and scientific validity of activities undertaken by the Secretary of Energy related to implementing the Nuclear Waste Policy Act. The Board reviews Department of Energy (DOE) activities related to the disposal, transportation, and packaging of spent nuclear fuel and high-level radioactive waste. Most of the spent nuclear fuel comes from the commercial generation of electricity, but some comes from defense activities. Virtually all of the high-level radioactive waste comes from defense activities.

Since the Board was established, its primary focus has been evaluating the DOE's efforts to characterize the Yucca Mountain site in Nevada to determine its suitability as the location of a potential repository for spent nuclear fuel and high-level radioactive waste. Since the site recommendation was approved by Congress in 2002, the Board has continued its review of the validity of the DOE's technical and scientific efforts and has increased its involvement in the important area of waste management, including transportation and packaging of the waste and plans for constructing and operating a repository. To gather information for its evaluation, the Board and its panels hold public meetings several times a year with the DOE and other interested parties.

Overview of Technical Issues

One of the two topics for today's hearing is a review of the DOE's Yucca Mountain program. And so today, Mr. Chairman, I will present a brief overview of some of the important technical and scientific issues that the Board has commented on in reports to Congress and the Secretary and in letters to the DOE in the nearly two years since we last testified before this Subcommittee. I will not comment on the second topic of this hearing relating to alterations in the Nuclear Waste Fund. That issue is outside the Board's technical purview.

In conducting its technical and scientific evaluation, the Board makes an effort to take an integrated look at how one part of the proposed repository system might affect another. The two major components of the repository subsurface system are the engineered system and the natural system. We have taken a similar approach in reviewing waste management activities, considering, for example, how the type of transportation packages selected by the DOE might affect the design of the repository surface facilities.

The following are a few examples of some of the important technical issues that the Board has commented on in the last year. To make the technical issues more relevant and understandable, I have organized them so that they roughly align with elements of the systems that I just described. I will begin with examples of Board comments on the engineered elements of the repository system.

The Engineered System

An important engineered component of the repository system is the waste package that will be used to dispose of spent nuclear fuel and high-level radioactive waste in a repository. As part of its technical review, at a meeting held last May, the Board invited the DOE to discuss how the repository tunnels would work with the waste packages to provide waste isolation. Based on information from that meeting, the Board sent a letter to the DOE last October, followed by a detailed technical report in November on the potential for corrosion of the waste packages during the period called the "thermal pulse." These two documents composed a Board letter to Congress and the Secretary that was issued in December, and they, like all Board letters and reports, are available on the Board's Web site: www.nwtrb.gov.

The thermal pulse is the period of roughly 1,000 years following repository closure during which temperatures will be high in repository tunnels. The Board has voiced concerns about the effects of high temperatures on repository performance almost continuously since the Board was established about 15 years ago.

The main focus of the Board's October letter and November technical report was the potential of salts deposited on the waste packages to absorb moisture from the air inside repository tunnels, resulting in corrosion of the metal packages. I will briefly summarize the major points in the Board's letter and technical report.

Based on the Board's review of data gathered and presented by the DOE and the Nuclear Regulatory Commission's Center for Nuclear Waste Regulatory Analyses, the Board believes that all the conditions necessary to initiate localized corrosion of the waste packages will likely be present during the thermal pulse, resulting in corrosion of the waste packages. Once started, the corrosion would likely propagate rapidly even after conditions necessary for initiation are no longer present. The result would be perforation caused by localized corrosion and possible release of radionuclides.

From a technical perspective, in the Board's opinion, the problems related to localized corrosion that I have just described could be avoided if the repository design and operation were modified. The data currently available indicate that perforation of the waste packages caused by localized corrosion is unlikely if temperatures are kept below boiling.

The DOE does not believe that conditions in repository tunnels will promote significant corrosion. The DOE also maintains that the conditions under which localized corrosion might occur are extreme and unlikely. The Board has looked at the information provided by the DOE supporting these assertions and has not found it compelling. However, we are devoting most of the time at our upcoming public meeting, to be held May 18-19 in Washington, D.C., to further discussion of these issues. We have offered broad latitude to the DOE to present additional data, analyses, and arguments related to localized corrosion and estimates of conditions in the repository tunnels. The Board is looking forward to an open and thorough exchange of information and views on these subjects.

The Natural System

The Board has long had an active interest in the fundamental understanding of the geologic systems that act as natural barriers to radioactivity migrating from a repository. The Board uses a combination of field excursions, laboratory visits, information-gathering, and formal meetings to conduct its evaluation of DOE activities in this area. Over the years, the Board has made numerous recommendations related to increasing fundamental understanding of and enhancing confidence in predictions of natural-barrier performance. Technical and scientific topics covered by those recommendations include hydraulic characteristics of major faults, colloid-facilitated transport of radionuclides, matrix diffusion, the nature and spatial extent of alluvial sediments, the scientific bases of computer models, and the use of natural analogs.

The Board continues to review DOE activities in this area. For example, at a Board panel meeting held two weeks ago, the DOE presented a variety of observations and experiments suggesting that natural barriers might provide waste isolation for time periods as long as the regulatory period and possibly longer for some radionuclides. The Board has not yet formally commented to the DOE on the information presented at the meeting, but we believe that geologic barriers are very important. Addressing uncertainties associated with specific aspects of the natural system can enhance confidence in predictions of natural-barrier performance.

The movement of water through the Yucca Mountain site is one of the most important factors affecting waste isolation. Several years ago, studies on chlorine-36 traces found at places in the exploratory studies facility seemed to imply the existence of "fast paths" where water might have moved from the surface to the level of the repository in about 50 years (a very short time). However, studies conducted since then have both supported and contradicted the first results. Because this issue is important to fundamental understanding and to the credibility of the DOE's scientific program, the Board has encouraged the DOE to reconcile the various study results. The DOE has commissioned a third-party review to help address the discrepancies. The Board agrees with this decision.

Another issue related to the natural system that the Board has commented on recently is the DOE's earthquake hazard analysis. Based on presentations made at a February 2003 Board panel meeting, the Board found that the DOE's analysis is generally sound. However, extending the analysis to exceedingly unlikely and, quite possibly, physically unrealistic seismic events raises serious questions related to understanding how the repository system will behave and what factors are important

to safety. Among other things, it also could cast unwarranted doubt on much of the excellent work carried out by scientists working for the DOE in this area. In June 2003, the Board sent a letter to the DOE with details of its findings and recommendations. The DOE is continuing its efforts to address these issues. The Board will review and comment on the results of the DOE's work.

The Waste Management System

Over the last year, DOE activities related to transportation of spent nuclear fuel, design of surface facilities, and its plans for surface and underground repository operations have expanded conspicuously. During that time, the Board's involvement in these important areas has increased commensurately. The Board's Panel on the Waste Management System has held two meetings in the last 12 months, and the plan is to hold more in the future.

Several Board recommendations to the DOE have come out of those sessions. For example, the Board recommended that the DOE develop and produce a Gantt chart (or its equivalent) showing the schedule for transportation planning activities; conduct a complete and accurate inventory of needed rail, truck, and barge access and egress infrastructure and site interfaces; review its waste inventory and acceptance assumptions; and explicitly consider security planning needs. We expect that over the next few years, the Board will become even more fully engaged in reviewing the activities of the DOE in this critically important area.

Safety Case and Performance Confirmation

Over the years, the Board consistently has pointed out the importance of the concept of a "safety case" in developing an integrated presentation of the various elements of a Yucca Mountain repository and how those elements would work together to contribute to waste isolation. The safety case would include information and arguments independent of performance assessment modeling, such as analog studies, which would provide additional lines of evidence for repository performance estimates. This concept is endorsed strongly by virtually all the major nuclear waste management programs abroad and has considerable merit. The Board believes that a narrative description specifically written to address this concept would make the DOE's approach to ensuring safety more transparent and understandable.

Another concept with significant potential for enhancing confidence in the DOE's repository performance estimates is a credible performance confirmation program. The Board has encouraged the DOE to develop a clear understanding of what performance confirmation will entail and to integrate its performance confirmation activities thoroughly with performance assessment and repository design.

Mr. Chairman, these are just a few examples of technical and scientific issues that have been the focus of the Board's work over the last year or so. The Board looks forward to continuing its review and to making recommendations to the DOE on the technical validity of DOE activities.

An equally important part of the Board's mandate is advising Congress on technical and scientific issues related to the DOE's implementation of the Nuclear Waste Policy Act. We take that responsibility very seriously. The Board stands ready to provide its technical perspective whenever appropriate so that policy-makers and members of Congress engaged in oversight can factor technical information into their decision-making.

Thank you for the opportunity to present the Board's views. I will be happy to respond to questions from the Subcommittee.

Mr. HALL. Dr. Duquette, thank you. We know that the DOE is going to submit its license application to the NRC later this year, and that the application and all of its documents are going to be voluminous. They are going to contain probably millions of pages of material that could maybe even fill half of this room here.

Will the NRC have enough technical staff with the knowledge, and with the skills, and the abilities, to review this application in a fair, and informed, and in a timely manner?

Mr. DIAZ. Yes, sir. We are prepared to have the resources needed, and the staff, who will be properly qualified to be able to judge the application on its technical merits. We also have been preparing for the electronic handling of this documentation to our system, which is called the Licensing Support Network.

As well as preparing an electronic docketing system that will assist all the parties to have access to all the information as the hearing process begins.

Mr. HALL. And you all have been here, I think, in attendance this morning have you not, and have heard a lot of the testimony. You heard the testimony about the risk of transporting any spent fuel in trucks, or by rail, and then of course by barge was pitched in.

And, for example, if a September 11 airplane crash happened, for example, into a transportation cask that it would be devastating. Have you reviewed—I understand that it would be devastating, but have you reviewed the possibility of a plane crashing into a transportation cask, and if so, what have you found?

Mr. DIAZ. Yes, sir, we have. We have just completed those studies recently and our present findings are that a transportation cask has been certified by the NRC and those that will be certified would actually resist the impact of a large aircraft without releasing radioactivity to the public.

Now, I cannot go into any further details, but the findings are a result of a significant series of work that has been conducted for the past several years. We have even carried them beyond the aircraft crashes, and we feel confident that the present design of this cask is quite resistant to terrorist attacks.

And they will provide substantial protection to the American public from the type of attacks that have been considered.

Mr. HALL. So crashes are really an almost remarkable stretch of the imagination isn't it, that it could ever happen?

Mr. DIAZ. It is a low probability scenario. However, we thought that it was our obligation to conduct those studies. Those studies are complete and they are classified studies.

Of course, the committee will make available these studies in the proper venue and at the proper time as the Chairman decides.

Mr. HALL. And they talked about the train tunnel fire in Baltimore in 2001 and they talked about—of course, they are looking for anything to tie and cast some doubt on the success of the operation.

Such an accident there would be disastrous. Well, any kind of accident like that would be disastrous, but what is the true effect and has the NRC reviewed the Baltimore train fire incident, and would it have resulted in the release of radioactivity if it had happened, and it had been hit as was the tunnel fire ignited in Baltimore?

Mr. DIAZ. No, sir, our studies indicate that it would not have resulted in a significant release of radioactivity. It would have been able to withstand the fire and the cask would not have been breached. So there would be no impact to public health and safety.

Mr. HALL. So remote that it might happen, but in abundance of caution, you have got to defend your position and spend time and money, and that is what runs these costs up, are frivolous accusations like that, that are costly to the American taxpayer.

But you have gone that extra step and in an abundance of caution on both of these, you have explored that?

Mr. DIAZ. We have, sir.

Mr. HALL. All right. I yield back my time and recognize the ranking member, Mr. Boucher.

Mr. BOUCHER. Well, thank you, Mr. Chairman. Chairman Diaz, when the license application for Yucca Mountain was filed with your agency, can you give us a sense of the timeframe that you are contemplating will be occupied for its consideration? How quickly do you think your agency will be able to act?

Mr. DIAZ. We will be ready when it is delivered. We stand ready to fulfill our responsibilities as established by the Act. We will be able to, within 90 days, determine whether the application meets the requirements, and that it should be of high quality to provide the information that needs to be on the record to proceed with further consideration of the application.

And if it fulfills those requirements, we should be able to proceed with the consideration of the application in the timeframe that the Congress has determined that we have to.

Mr. BOUCHER. And what timeframe is that?

Mr. DIAZ. It is 3 years for full consideration, and with hearings it could be extended an extra 12 months if the time is needed.

Mr. BOUCHER. And you can meet that timeframe, you are confident?

Mr. DIAZ. Sir, we are making sure that we will be prepared to meet that framework. I cannot guarantee you that we will, because it depends on—and I am sorry to insist on this—a very high quality application, and on the number of potential changes, and a series of processes.

But the Nuclear Regulatory Commission is ready to process it and to do it in a timely manner as established by Congress.

Mr. BOUCHER. In the event that your agency finds that for some reason the application is not adequate and that additional information would have to be provided, and you have issues with the application, do you have any kind of process under which you could issue a permit subject to the applicant fulfilling certain specified conditions?

Mr. DIAZ. No, sir.

Mr. BOUCHER. You do not have any process where that can be done?

Mr. DIAZ. No, sir. If the application does not meet the requirements, our processes will say you need to give us more information. You need to provide additional information, and if it does not meet what we consider our standards for submittal of an application, they will actually have to put additional work into it.

It might not have a tremendous impact on the time line of 3 or 3½ years if the Department of Energy is capable of fulfilling our requests in a timely manner. So a period of a few months might not be a show-stopper, but certainly we are encouraging the Department of Energy to make sure that the application is as complete and of high quality as possible.

Mr. BOUCHER. Well, thank you very much, Chairman Diaz. Dr. Duquette, there will be testimony on the panel that will follow you to the effect that some of the funding restrictions that were evident in the year 2003 for the Department of Energy may already have interfered with the Department's ability to move forward effectively with regard to planning for the transportation of high level nuclear waste.

I think Commissioner Ervin will be testifying to that effect. Does your board share any of those concerns? Do you believe that DOE's work, in terms of planning for transportation, has been impaired by virtue of the funding restrictions that have been demonstrated to date?

Mr. DUQUETTE. Sir, the Board does not get involved with the funding aspects at all, and we have only begun to explore the transportation issues. In fact, our first panel meeting on transportation was only this last January.

So it is a great deal of interest to us, of course, but we can't respond I don't think to whether or not the Department of Energy has been slowed down because of funding restrictions. Again, I will repeat that funding is outside of our purview, but transportation is certainly of a great deal of interest to us, and we are beginning to study it at the present time.

Mr. BOUCHER. All right. Well, even though funding is outside your purview, the transportation activities are within your purview, and presumably you are surveying what the Department of Energy is doing at this point, in terms of its planning for transportation.

So I would simply put the question again. Do you have any evidence or belief that the fact that funding has not flowed as effectively as it should has in some way hindered the Department's ability to move forward as expeditiously as it could have and should have with regard to planning for transportation?

Mr. DUQUETTE. No, we have no evidence of that.

Mr. BOUCHER. You have no information to that effect?

Mr. DUQUETTE. No, we do not.

Mr. BOUCHER. Thank you very much. Thank you, Mr. Chairman.

Mr. OTTER [presiding]. I am going to recognize myself now. I just took over as chairman as you might noticed. Mr. Hall, Chairman Hall, had to go out for a short period of time. Mr. Duquette, the Nuclear Waste Technological Review Board has several concerns with the DOE's repository design, and concerning primarily I guess with the amount of heat and high temperatures that would be present, and those aspects of the repository itself.

Does your organization believe that the repository design will fail to meet the EPA ground water standards for Yucca Mountain?

Mr. DUQUETTE. I have to say that the models that have been presented for the transport of radionuclides out of the repository are fairly complex. They are based on very complex models. I don't think that we have enough information yet to know whether it will meet the requirements or not.

Our concern, our immediate concern about the temperature in the repository is that information presented to us by the Department of Energy based on their own data indicate that there is an almost 100 percent probability of the breaching of the containers because of corrosion processes that can occur in the repository.

I don't think the Board wants to go on record to say that that will necessarily release radionuclides to the environment. It basically simply says that they will be released from the container.

Because of the concept of the repository, we believe that based on multiple barriers, and we are concerned about breaching one of the barriers, and releasing any radionuclides at all, it is our belief

that if the temperatures could be lowered in the repository that the corrosion problem would essentially go away, and that the containers would not be breached.

And so there would not be any release at that level in the repository.

Mr. OTTER. Will the NRC adequately evaluate your technical concerns in the licensing process?

Mr. DUQUETTE. We are not directly involved in the licensing process. Our mandate from you, the Congress, is that we should review the information presented by the Department of Energy and simply comment on their scientific and technical viability.

The decision to go ahead with licensing is going to be made by policymakers, hopefully based on some of the information that we present to you and other policymakers. But we are not going to take a position as far as I can tell on licensing.

Mr. OTTER. Well, we are not going to sit here in a vacuum. We are certainly going to take any advice and input that you would have relative to the safety, and relative to the success of the designed mission.

So you are still going to have an opportunity, just as you do today, to give input to the policymakers, and so I guess I would restate the question. If you are going to guess that there is something wrong with the technical concerns that you may have, would you not then opine to this committee, and opine to others here on The Hill that perhaps it is not a good idea to license it?

Mr. DUQUETTE. Absolutely.

Mr. OTTER. And you are prepared to do that?

Mr. DUQUETTE. We are prepared to do that if asked. And new information that we provide, by the way, is provided to you in annual reports, as well as letter reports that we send to you.

It is posted on our web for anyone who needs access to it to use. I think we will respond to whatever the Congress asks us to do.

Mr. OTTER. Chairman Diaz, you are probably aware of this, but there is significant disagreement between yourself and Mr. Duquette's organization, and the Department of Energy, regarding the technical approach to Yucca Mountain.

The Board believes that the Department's high temperature as we just discussed, the high temperature designed from Yucca will result in corrosion of the waste packages and potential release of radioactivity.

Will the NRC fully and openly explore the concerns expressed by the NWTRB when it reviews the Department's license application for Yucca Mountain?

Mr. DIAZ. Yes, sir. We are addressing those issues. Our staff is continues to interact with the Board, as well as the different parties, and the Department of Energy, and continues to interact in many different ways with the State of Nevada.

We are looking at how to best address these issues. Of course, they we will have to eventually be resolved during the licensing process. We do have some disagreements, but not in every aspect, but we do have some disagreements in the corrosion area.

Our staff continues to interact and we hope that as time gets closer that we will get some convergence on those issues. What the

rest of the issues will be, I can't tell you at the present time, but we certainly will keep the committee apprised of our evaluations.

Mr. OTTER. What are your disagreements then with Mr. Duquette's organization and opinion of the corrosion effects from the high temperatures?

Mr. DIAZ. Right, there are disagreements in the corrosion rate. There is no doubt that if you put it at a function of time with any type of package, and you could have a very long time, a hundred-thousand, or thousands of years, that packages will corrode.

How they will corrode and the time for the corrosion to actually impact the release of radioactive materials, and then the transportation of those radionuclides through the environment to wherever they are placed, and we are taking no position on where they are placed, are very complex issues.

But we do seem to have a technical disagreement. The staff is interacting with the Board, and I do think that we have resolved those disagreements, but we will continue to work with them and trying to resolve them.

Mr. OTTER. The gentleman's time has expired. The chairman would recognize the gentleman from Illinois, Mr. Shimkus. The chair stands corrected. The chair will recognize Mr. Markey from Massachusetts.

Mr. MARKEY. I thank the chairman very much. We have seen recently tragically in Spain a rail system that is vulnerable to terrorist attack, and we have seen even more recently that in France a bomb was buried under rail tracks and a terrorist group has said that there are nine bombs that have been buried somewhere on the rail system, and they would blow them up unless they received money.

When do you plan, Mr. Chairman, on doing a rulemaking on the threat of terrorism to and sabotage of high level waste transport by rail?

Mr. DIAZ. I don't know when we are going to do a rulemaking on that issue, but what we have done is that we have conducted a study.

Mr. MARKEY. I know, but when are you going to do a public rulemaking on terrorist threats to the rail transport of nuclear waste?

Mr. DIAZ. I cannot tell you that right now, Congressman. I think that the Commission has not decided on what is the best way to address this issue. However, as far as the transportation of the spent fuel, if the DOE provides an application, then at that time that entire process will become part of the public record, and at which time will be able to become adjudicated.

So it is the kind of different processes that we are making in this arena, and the process that is established right now would be conducive to a fair and equitable process in which different communications of the issues will be available.

Mr. MARKEY. Well, my own position to you is that the best process is a public rulemaking that would allow for the American people to determine what level of security they want, and given what is happening in Europe right now.

We learned 2 days ago that in Boston that al-Qaida was using the LNG facility and Algerian ships as their entry point to go to

Boston. None of the Federal officials ever told us in Boston about that.

Our city is outraged that they did not learn about al-Qaida penetration of our LNG facility. So I strongly recommend to you that you have a public rulemaking on that issue. I think it would be best for the agency in the long term if you did not avoid the central security concern that Americans have.

On January 15, 2004, Dr. Paul Craig resigned as a member of the Congressionally established Nuclear Waste Technical Review Board so that he could speak more freely about the waste dumping, and who has since said that the fact that the current repository design will cause the canisters to corrode and leak, and will result in DOE having to admit that its current design is a failure, and redesign the repository, with a delay of several years. Do you agree with Dr. Craig's statements? Dr. Duquette, quickly, please.

Mr. DUQUETTE. I'm sorry, I thought you were addressing Dr. Diaz. First of all, Paul Craig did not resign from the Board in order to be free to make public statements. Keep in mind that he served on the Board for 7 years, and he knew what was going on at Yucca Mountain for all of that time.

He resigned from the Board for some personal reasons, and I think that there is a newspaper article or a newspaper editorial out there that misquoted him considerably.

Mr. MARKEY. So do you disagree with the position or the contention that there will have to be a redesign of the repository because of the current design failure?

Mr. DUQUETTE. No, sir, I don't. I think you were not here when I made my opening statement, but basically the Board believes strongly based on data provided by the Department of Energy that in the current design or under current design conditions the data that has been presented to us by the Department of Energy, there will be corrosion of the containers, and there is the possibility of a breach in the containers.

That is absolutely correct. I indicated earlier that the Board isn't necessarily convinced that will release radionuclides to the environment outside of the repository, but it could lead to the release of radionuclides inside the vault.

Mr. MARKEY. And you are willing to live with that result?

Mr. DUQUETTE. No, sir, I did not say that. In fact, my personal opinion, and not the Board's opinion, but my personal opinion is that you would be compromising one of the multiple barriers, and we believe that there are designs that can be used that will not result in corrosion. So it will not compromise that particular barrier.

Mr. MARKEY. And finally isn't it true that spent fuel coming out of a reactor has to stay cool onsite at the reactor for at least 5 years before it is cooled enough to be shipped anyway?

So that means that even if Yucca Mountain is built, so long as there are still operating reactors in the country that there will still be spent fuel stored at other sites across the country?

Mr. DIAZ. That is correct. There would be spent fuel stored because the spent fuel will be coming systematically out of these reactors as they refuel. So there will be spent fuel stored in the sites, but the objective of a repository would be to remove the majority

of the fuel that has been already used, and are no longer serving—

Mr. MARKEY. But in conclusion, the most radioactive materials for at least 5 years will remain at each one of these nuclear power plants right next to the reactor; is that correct?

Mr. DIAZ. That is correct. The fresh and the spent fuel will be close to the reactor, but most of the fuel, or the larger amount of spent fuel will be removed from the site.

Mr. MARKEY. But the most radioactive spent fuel will be right there next to the reactor in storage?

Mr. DIAZ. Per unit waste, that is correct.

Mr. MARKEY. That is correct. Thank you.

Mr. HALL. The chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman, and I would remind my friend from Massachusetts that if we would open up our available natural gas reserves along the coast lines that we would not have the LNG facilities and that we would have to import liquid and natural gas, and that is another debate for—well, not really, because this is an energy debate, and it is about national security, and it is about having a reliance on our own available fuels.

Because if we don't move on a Yucca Mountain the reality is that the storage of the high level nuclear waste, which is all across the country in major metropolitan areas will stay there and cool, and nuclear facilities will close.

That is the big picture, and that is what the debate is. And now we are moving forward and really the debate we had earlier was now are we trying to sustain death by a thousand cuts by limiting the funding, and all these other options.

And I am going to follow up really on Chairman Barton's question to Mr. Card on the licensing date, and so my question would be to Mr. Diaz, or Chairman Diaz, excuse me, the NRC advanced 293 key technical issues for DOE to work on.

To date, you have closed 90 as I am being told, which makes 123 that are still under review by the NRC, and 80 remain to be submitted to the NRC. With the deadline of December 2004, and meaning 9 months left, do you think that the NRC has the staff available to quickly review and approve all the remaining key technical issues over the next 9 months?

Mr. DIAZ. Yes, sir. We are ready to do that, and we are working closely with the Department of Energy to submit their analysis and results of these agreements as quickly as possible. The key technical agreements will all have to be resolved by the time the license application is submitted.

However, some of those agreements are what we call having long term issues with them, some of them will continue, but that is acceptable to us once we have received the resolution of these key technical issues by DOE, and to receive them in the application.

And those few that have long term implications will be analyzed, and reviewed, during the license review period.

Mr. SHIMKUS. Thank you, Mr. Chairman. Mr. Chairman, I don't have any further questions. So I yield back my time.

Mr. OTTER. This panel is then excused. We thank you very much for your time and your testimony, and being here. Thank you.

We will now invite the fourth panel to come forward. The fourth panel will be the Honorable Sam J. Ervin IV, the Commissioner from the North Carolina Utilities Commission, on behalf of the National Association of Regulatory Utility Commissioners in Raleigh, North Carolina.

Also, Mrs. Angelina Howard, Executive Vice President of the Nuclear Energy Institute, Washington, DC; and Mr. John T. Mitchell, President and General Manager of Bechtel. I welcome the fourth panel, and I welcome you to the committee room today, and we await your testimony.

Mr. Ervin.

STATEMENTS OF HON. SAM J. ERVIN, IV, COMMISSIONER, NORTH CAROLINA UTILITIES COMMISSION, ON BEHALF OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS; ANGELINA S. HOWARD, EXECUTIVE VICE PRESIDENT, NUCLEAR ENERGY INSTITUTE; AND JOHN T. MITCHELL, PRESIDENT AND GENERAL MANAGER, BECHTEL SAIC, LLC

Mr. ERVIN. I thank you, Mr. Chairman. As you indicated, I am Commissioner Sam Ervin IV of the North Carolina Utilities Commission, and I served as chairman of the subcommittee on nuclear issues of the committee on electricity at the National Association of Regulatory Utility Commissioners.

As chairman of the subcommittee, it focuses on the issues that are the subject of today's hearing, and I am testifying as you indicated on behalf of NARUC.

My testimony also reflects the views of the North Carolina Utilities Commission, and I very much appreciate the chance to appear before you this morning in hopes that my full statement will be incorporated in the record.

NARUC's goals in the nuclear waste area are simple. NARUC believes that the Federal Government should meet its obligations to accept commercial spent nuclear fuel and to safely dispose of that waste in geological repositories in a timely manner.

The Nuclear Waste Policy Act of 1982 as amended created a bargain between the Federal Government and the customers of the Nation's nuclear generators. Under the terms of that bargain, customers agreed to pay a one mill per kilowatt hour fee for generation from nuclear facilities.

In-turn, the Federal Government agreed to begin accepting waste to a proposed repository by 1998. The Nation's rate payers have provided more than \$21 billion to the Nuclear Waste Fund in the form of direct contributions from income earned on the principal since 1983.

And unfortunately as we all know, the proposed repository has yet to open. At this point, NARUC believes that every effort should be made to open the proposed repository by 2010 in accordance with the Department of Energy's current schedule.

The process of attempting to open the repository has been a difficult and protracted one as we all know. Despite Congress' decision to proceed with the development of the Yucca Mountain facility in 2002, the timely opening of the proposed repository by 2010 is not a fait accompli.

The Department of Energy has to meet a number of challenges in order to accomplish that goal. The United States Court of Appeals for the D.C. Circuit is currently considering several challenges to the fund, and achieving waste acceptance by 2010 requires as we just got through discussing timely approval of the Department of Energy's license application by the NRC.

In all honesty, however, the biggest obstacle to the beginning of waste acceptance in 2010 may be the risk of inadequate funding during the next few years.

The consequences of failing to begin waste acceptance by 2010 are serious. The administration has estimated that it costs more than \$500 million annually to manage governmental high level radioactive waste in the event of further delay.

In addition the Department of Energy's liability for failing to meet the original 1998 deadline will increase even more if additional delay occurs. Finally, continued use of existing storage sites, aside from imposing a burden on nuclear generators and their customers raises a serious homeland security issue.

The level of funding for the proposed repository has been and remains a source of concern to NARUC. Although income continues to flow into the Nuclear Waste Fund, there is a persistent gap between the annual appropriations to the repository program and the amount of money entering the Nuclear Waste Fund each year.

The administration's budget request for the program has been reduced for the past decade, despite the availability of adequate monies to support the program from the fund. If NARUC understands the situation, and I certainly don't purport to be an expert in Federal budgetary rules, the existing rules make no distinction between monies appropriated for the Nuclear Waste Fund and other funds available to the Department of Energy.

As a result, as we understand, that any increase in the amount appropriated for the nuclear waste program must be offset under current rules by decreases in other DOE programs.

The primary difficulty created by the existence of these rules need not persist. There is a solution to the funding problem, and it involves renewed reliance on various mechanisms created in the Nuclear Waste Policy Act.

Put simply the existing budget rules should be changed so that the Nuclear Waste Fund is only employed by its intended purpose.

At this point as I understand it, there are two specific proposals before you. The first of these proposals is H.R. 3429, which was introduced by Representatives Shimkus and Rush.

The bill includes many provisions, including making annual fund revenues a de facto amount appropriated for the program through 2010 and ensuring that fund revenues not needed for repository purposes in any given year remain available for their intended purpose at a later time.

The other proposal which has been introduced by request is by Chairman Barton, is H.R. 3981, and embodies the administration's proposal to reclassify Nuclear Waste Fund revenues as offsetting collections beginning this year.

The administration's proposal seems simpler than the approach spelled out in H.R. 3429, and would continue to provide adequate

appropriations for the repository program through the construction of the necessary surface facilities.

There are a number of acceptable solutions to the current funding problem, including the proposals embodied in H.R. 3429 and H.R. 3981, and perhaps others. At this point, NARUC will support any approach to resolving the existing problems so long as the imbalance between Nuclear Waste Fund revenue and annual appropriations end, and the proposed change doesn't threaten the beginning of nuclear waste acceptance by 2010.

The Nuclear Waste Program is of immense national importance. Having overcome the political hurdle inherent in the vote on the joint resolution in 2002 to forward with the Yucca Mountain facility in 2002, Congress should focus on ensuring that the means to license, construct, and operate the proposed repository are made available to the Department of Energy.

The Nation's rate payers have been paying for a nuclear waste repository for over 20 years. It is past time that they get what they paid for. NARUC urges Congress to reform the nuclear waste funding process issue this year.

[The prepared statement of Hon. Sam J. Ervin, IV follows.]

PREPARED STATEMENT OF SAM J. ERVIN, IV, COMMISSIONER, NORTH CAROLINA UTILITIES COMMISSION ON BEHALF OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

My name is Sam J. Ervin, IV. I am a member of the North Carolina Utilities Commission, having served in that capacity for four years. I also serve as the Chairman of the Subcommittee on Nuclear Issues and Waste Disposal of the Electricity Committee of the National Association of Regulatory Utility Commissioners (NARUC). As Chairman of the NARUC Subcommittee that focuses directly on the issues that are the subject of today's hearing, I am testifying today on behalf of that organization. In addition, my testimony reflects the views of the North Carolina Utilities Commission. On behalf of NARUC and the North Carolina Utilities Commission, I very much appreciate the opportunity to appear before you this morning. The issues that you are addressing in this oversight hearing are very important to NARUC's membership and the North Carolina Utilities Commission, and I am grateful to have this opportunity to present our point of view concerning the progress of the Yucca Mountain project.

NARUC is a quasi-governmental, non-profit organization founded in 1889. Its membership includes the State public utility commissions serving all States and territories. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. NARUC's members regulate the retail rates and services of electric, gas, water, and telephone utilities. We are obligated under the laws of our respective States to ensure the establishment and maintenance of such utility services as may be required by the public convenience and necessity and to ensure that such services are provided under rates and subject to terms and conditions of service that are just, reasonable, and non-discriminatory.

NARUC's goals in the nuclear waste area are well known and have been stated before this and other Congressional committees on a number of prior occasions. NARUC believes that the federal government needs to meet its obligation under the Nuclear Waste Policy Act of 1982, as amended, to accept spent nuclear fuel from utilities and other nuclear generators in a timely manner. NARUC further believes that the nation's ratepayers have upheld their end of the bargain struck in the Nuclear Waste Policy Act by providing, either directly or through income generated on prior payments, over \$21 billion for use in constructing a nuclear waste repository. Finally, NARUC believes that the Nuclear Waste Fund should only be employed for its intended purpose and that the monies in the Nuclear Waste Fund should be utilized, along with appropriations from the Department of Defense budget, for the sole purpose of supporting the opening of the Yucca Mountain facility in a timely fashion. The basic principles underlying NARUC's approach to the nuclear waste issue provide a solid foundation for future policy decisions concerning the nuclear waste program.

The process of attempting to open a geologic repository for the storage of high-level radioactive waste, including spent nuclear fuel, has been a protracted one. As you know, the Nuclear Waste Policy Act contemplated that the proposed repository would begin to accept waste in 1998. Instead, over five years later, the Department of Energy (DOE) is still engaged in the process of attempting to license, construct, and open the proposed repository. In the meantime, the customers of the nation's nuclear facilities continue to pay the required one mill per kilowatt-hour fee that is intended to finance the proposed repository while, at the same time, continuing to bear the cost of on-site waste storage as well. The nation's debt to these customers is long past due. Moreover, the Administration indicated in its FY 2003 budget request that it will cost \$500 million annually to manage government high-level radioactive waste at Department of Energy sites in the event waste acceptance at the proposed Yucca Mountain facility is delayed past the currently-scheduled 2010 opening date. Finally, the federal courts have decided that the Department of Energy has breached its statutory and contractual obligation to take spent nuclear fuel by the date specified in the Nuclear Waste Policy Act, subjecting the nation's taxpayers to significant damage liabilities that have yet to be quantified and that will continue to increase with the passage of time. In evaluating the potential impact of these liabilities on the federal budget, it is important to remember that the United States Court of Appeals for the Eleventh Circuit has determined that monies from the Nuclear Waste Fund may not be used to pay any damages ultimately awarded to the nuclear industry for breach of the Department of Energy's obligation to take nuclear waste beginning in 1998. While we do not have an agreed-upon estimate of the government's liability for the added storage costs for commercial spent fuel that will result from further delay in waste acceptance at Yucca Mountain, we can safely assume that the cost of delay relating to commercial spent nuclear fuel is several times the cost of delay identified for government material since there is nine times more commercial waste than governmental waste. These factors make taking action to ensure that further delay in opening the Yucca Mountain facility does not occur even more imperative.

The decision by both Houses of Congress to uphold the President's proposal to proceed with the development of the Yucca Mountain facility in 2002 was gratifying to NARUC and its members. Although the process that led to the recommendation of the Yucca Mountain site by Secretary Abraham, the President's decision to concur in the Secretary's recommendation, and the Congress' decision to override Governor Guinn's veto brought much needed attention to the nuclear waste disposal issue, the passage of the Congressional resolution reaffirming the federal government's commitment to the development of the Yucca Mountain facility does not end the need for Congressional supervision of and commitment to this program. In other words, the adoption of the 2002 Congressional resolution should certainly not lead to complacency on the part of any branch of the federal government. The timely opening of the Yucca Mountain facility is not, as this committee well knows, a fait accompli. As you are aware, the United States Court of Appeals for the District of Columbia Circuit heard arguments in January concerning a number of legal challenges by the State of Nevada and others to numerous facets of the repository program and related portions of the Code of Federal Regulations, including the federal government's decision to proceed with the selection of the Yucca Mountain site. Assuming that the outcome of these proceedings is generally favorable to the Yucca Mountain program, certain budgetary issues still need to be resolved in order to minimize the risk of additional delay. In all honesty, the biggest obstacle to the beginning of waste acceptance at the proposed repository in accordance with the Department of Energy's current schedule is the risk of inadequate funding during the next few years.

As a result, NARUC believes that it is vitally important for Congress to take certain specific steps on an expedited basis to ensure that the Yucca Mountain facility opens without additional delay. Most importantly, Congress should act to ensure that adequate money is made available for the licensing, construction, and operation of the proposed facility. Unless adequate money is appropriated for the Yucca Mountain project, the proposed facility will not open in accordance with the current schedule, resulting in increased costs to both the federal government, the nuclear industry, and the customers of the nation's nuclear generators. Therefore, I repeat, the most important issue for Congress to address in connection with the nuclear waste program at this time is ensuring that adequate monies are appropriated for the Yucca Mountain project.

The history of funding for the Yucca Mountain program is and has been a source of concern to NARUC and its members. Over the past decade, fee revenue has continued to flow into the Nuclear Waste Fund at an ever-increasing level, a pattern that reflects improving nuclear industry productivity. Earnings on the balance in

the Nuclear Waste Fund have grown to the point where they have exceeded fee revenue in some years. In the face of this increase in the amount of available resources, annual appropriations have consistently been reduced from the amount requested by the present and past Administrations for the last decade. Although over \$21 billion dollars has been collected for the Nuclear Waste Fund from ratepayers to date, only about \$6 billion has been expended from the fund to support the repository program. This reduces the likelihood that important milestones associated with the repository program will be met, the most important of which is the date upon which nuclear waste begins moving to the repository for storage. Furthermore, spent nuclear fuel continues to accumulate in 77 locations that were never intended to be indefinite storage facilities. Although the Nuclear Regulatory Commission and the nuclear industry express confidence that the present practice of storing spent fuel at reactor sites is safe, NARUC agrees with Secretary Abraham that permanent storage of nuclear waste at the Yucca Mountain repository would be more secure than on-site storage and that the prospect of further delays in opening the Yucca Mountain facility raises a serious homeland security issue.

The history of the budget process relating to the Civilian Radioactive Waste Management program suggests that there is a risk that past funding problems will continue in the future. For most of FY 2003, funding for the Yucca Mountain program was determined by a series of continuing resolutions, a development that left the amount of money available for use in connection with the repository program in a state of fundamental uncertainty. When the relevant appropriations bill was finally passed, the approved amount was 23 percent lower than the amount that the Administration had said was absolutely necessary to assure the submission of an adequate license application to the Nuclear Regulatory Commission by the end of 2004. Although the Secretary of Energy and the individuals managing the repository program stated that transportation planning would be "ramped up" in 2003, that aspect of the program became one of the first casualties resulting from the FY 2003 budget reduction. As a result, reductions in the amount requested for the Yucca Mountain program have real world consequences that could affect the date upon which waste acceptance begins.

The leadership shown by the House of Representatives in approving an increase over the President's FY 2004 Budget request of \$591 million to \$765 million was an encouraging attempt to both support the President's initial budget request and to make up for the \$134 million cut that occurred in 2003. Although the final amount approved in conference was only \$580 million, it was the closest Congress has ever come to fully funding the repository program consistently with Administration requests in recent years and resulted from the monumental efforts of many members of this subcommittee and others to avoid further delay in the date upon which waste begins to be accepted at the proposed repository. Similar efforts may not, however, be sufficient in future years because the program is just approaching the period when the Department of Energy will need ever-higher appropriations in order to meet the heavy cash requirements inherent in building the repository and procuring very expensive shipping and disposal waste containers.

These funding difficulties need not persist. There is a solution to the funding problem that seems perfectly obvious to us. The money is available to sustain the required level of program spending through the use of the very funding mechanism contemplated in the Nuclear Waste Policy Act. The \$14 billion balance in the Nuclear Waste Fund, which continues to grow every year, provides more than enough money to permit the Department of Energy to maintain the current schedule, assuming that these monies are actually made available for use in the program. The real problem lies in developing an approach to funding the Yucca Mountain program that ensures that the monies paid in to the Nuclear Waste Fund by the nation's electric ratepayers are actually devoted to the purposes for which that fund was created. The best way to achieve that result is for Congress to reform the process by which monies from the Nuclear Waste Fund are appropriated for repository program activities.

As we understand it, the existing budget rules applicable to the Yucca Mountain program make no distinction between monies appropriated from the Nuclear Waste Fund and other general funds available to the Department of Energy as a whole. As a result, any increase in the amount appropriated for the program from the Nuclear Waste Fund currently must be offset by decreases in expenditures for other Department of Energy programs despite the fact that the nuclear waste program is the only Department of Energy program that can be appropriately paid for from the Nuclear Waste Fund. Although the existence of such a limitation might constitute sound budgetary policy in the event that all Department of Energy programs were supported through general appropriations, such a limitation seems overly restrictive given the Nuclear Waste Fund's status as a special fund containing monies

contributed by a specific group of Americans for use in a particular way. As a result, NARUC believes that the key to timely completion of the Yucca Mountain project is for Congress to reform the process by which the monies from the Nuclear Waste Fund are made available for use in connection with the repository program.

There have been a number of efforts to attempt to resolve this problem in the recent past. As I have already pointed out, the House has taken a leading role in trying to solve the funding problem. In addition to last year's increase in the repository program budget, the House has evaluated the appropriateness of more fundamental solutions to this problem on a number of occasions. The report accompanying the FY 2001 appropriations bill issued by the House Appropriations Committee requested the Secretary of Energy to review the management and financing of the Civilian Radioactive Waste program. Secretary Abraham submitted a report in September 2001, in response to this request entitled an "Alternative Means of Financing and Managing the Civilian Radioactive Waste Program." The Secretary's report indicated, consistently with statements made in connection with the Administration's FY 2004 budget request, that annual funding for the Yucca Mountain program needed to average \$1.3 billion to ensure that the repository begins to accept waste in 2010. As far as NARUC is aware, no action has been taken on the basis of the recommendations of that report to date. NARUC was, however, encouraged by the House's 2002 decision to consider including a provision in H.R. 4 that would have taken the Nuclear Waste Fund "off-budget." As NARUC understood it, the adoption of such an approach would have meant that annual appropriations from the Nuclear Waste Fund for use in the repository program would be limited only by the amount of revenue coming into the Fund in any particular year. It is our understanding that this provision was removed at the direction of the Budget and Rules Committees. Taking the Nuclear Waste Fund "off-budget" remains, in our opinion, a viable option that should be given further consideration in addition to other proposals that have recently been placed on the table. The Administration's FY 2004 budget alluded to an "alternative funding proposal" that would permit temporary cap adjustments for FY 2004 and FY 2005. So far as NARUC is aware, however, no specific alternative funding proposal of this nature was submitted to Congress in connection with the FY 2004 budget process. Although there are certainly legitimate reasons for the Congress to retain budgetary control over expenditures for the Yucca Mountain facility, it is NARUC's hope that the means chosen to achieve that end will not result in a continuation of the program's past budget problems and that fundamental changes in the funding process will be adopted that make the monies in the Nuclear Waste Fund more readily available for use in supporting the repository program.

The manner in which the mechanics of the appropriations process are designed is, of course, a matter committed to the sound judgment of Congress and not to an association of State regulators. However, as is evidenced by the letter sent by public utility regulators from 23 States to the Director of the Office of Management and Budget late in 2002, NARUC believes that State commissions have a valid justification for promoting reform of the process by which monies from the Nuclear Waste Fund are expended in support of the Yucca Mountain project. There are probably a number of acceptable ways for the current problem to be resolved, ranging from modification of the existing budget rules to taking the Nuclear Waste Fund "off-budget." At this point, we are willing to support a range of alternative methods for reforming the appropriations process as long as the imbalance between the amount of revenue entering the Nuclear Waste Fund and the amount of monies actually expended from the fund in support of the repository program ends. Any reform, however structured, should ensure that future annual appropriations are limited by the needs of the program rather than the amount appropriated in the past, particularly given that past appropriations were barely adequate for the study period and are totally inadequate for the licensing, construction, and waste transportation phases that lie ahead. There is no question but that measures to assure that monies from the Nuclear Waste Fund are spent wisely are appropriate. Those measures should not, however, thwart the entire purpose of the Yucca Mountain program. Assuming that Congress believes that expenditures from the Nuclear Waste Fund need to be capped for budget oversight reasons, such expenditures should only be capped at the sum of fee revenues and earnings on the balance of the fund received in a particular year. As we understand it, expected program needs, even in peak years, should not exceed the total that would be available under the application of such a formula. The Department of Energy projects that \$1.5 billion will be added to the Nuclear Waste Fund each year during the remainder of this decade and that the Department of Defense budget will contribute an additional \$600 million per year toward the repository program. For these reasons, there is no question that the amount of money flowing into the Nuclear Waste Fund coupled with adequate support from the Department of Defense budget will suffice to pay for needed work on the Yucca

Mountain program over the next several years as we near initial repository operations. Any reform proposal should also provide that increased expenditures from the Nuclear Waste Fund for support of the repository program would not necessarily result in the reduction of other Department of Energy expenditures, since the funds used to support those other programs come from a different source that is not directly tied to the programs in question. A failure to reform the process by which monies from the Nuclear Waste Fund are appropriated for use in the repository program as NARUC suggests will condemn the Yucca Mountain program to additional years of fiscal uncertainty and undermine the progress made by the 2002 decision to approve the Administration's recommendation that the program go forward.

As NARUC understands it, there are at least two proposals for reforming the budgetary process relating to the Yucca Mountain program pending before the House that merit serious consideration. The first is the proposed Nuclear Waste Financing Act, H.R. 3429, introduced by Congressmen Shimkus and Rush. As I understand it, H.R. 3429 would treat the receipts, proceeds, and recoveries realized by Department of Energy associated with the Nuclear Waste Fund as offsetting collections and authorize expenditures from the Nuclear Waste Fund for nuclear waste disposal activities in the amount of \$725 million for FY 2005 and in the amount deposited in the Nuclear Waste Fund for FY 2006 through FY 2010. H.R. 3429 also includes provisions intended to preserve the corpus of the Nuclear Waste Fund and make it available in future fiscal years. The enactment of H.R. 3429 would accomplish many of the objectives I have previously outlined for fiscal years 2005 through 2010, assuming that sufficient monies are included in the Department of Defense budget to meet expected repository program needs in those critical years. NARUC particularly approves of the provision in H.R. 3429 that ensures that revenue collected in any year in excess of that year's program needs may be rolled over for use in connection with the repository program in future years rather than allowing such excess revenue to be diverted to other uses. The enactment of H.R. 3429 would allow Congress to ensure adequate funding for the program from the beginning of the construction phase through the existing anticipated waste acceptance date. After the construction license is issued, NARUC assumes that Congress could consider revising the funding mechanism to provide adequate sustenance for the program once waste shipments begin.

The second proposal well worth considering is the one referenced in the President's budget proposal for FY 2005. At the time that the President's budget proposal for FY 2005 was submitted, the Administration indicated that it would submit a legislative proposal to reclassify Nuclear Waste Fund fee revenue from its current status to "offsetting collections" beginning this year and continuing until construction of the surface facilities for a fully operating repository have been completed. As a matter of fact, the President's budget proposal assumes that dedicating the \$749 million in fee revenues forecast for this year for use in connection with the repository project would eliminate the need for any appropriations from the Department of Energy's discretionary budget. On February 27, 2004 Energy Secretary Spencer Abraham submitted proposed legislation containing the specifics of the Administration's proposal to Congress. Chairman Barton has introduced the Administration's proposal as H.R. 3981 by request. Although the Administration's proposal is similar to H.R. 3429, it is both simpler and would have a longer-lasting impact given that the Administration's proposal does not halt the dedication of current revenues from the Nuclear Waste Fund for use in connection with the repository project until construction of the surface facilities has been completed. The intent of both bills is identical and the enactment of either piece of proposed legislation would further NARUC's objectives of ensuring that the ratepayers' contributions to the Nuclear Waste Fund will be used for their intended purpose and that the Department of Energy is provided with the resources that it says are necessary to begin waste acceptance in 2010. At its Winter Committee Meetings held a couple of weeks ago, NARUC adopted a resolution, a copy of which is attached to this testimony, urging enactment of any legislation, including H.R. 3429 or the Administration proposal, that has the effect of reforming the budgetary process so as to ensure the timely availability of sufficient funds to enable initial waste acceptance at the repository in 2010.

The nuclear waste program is of immense national importance. Having overcome the political hurdle inherent in the vote on the joint resolution in 2002 to move forward with the Yucca Mountain process, the Congress should focus on ensuring that the means to complete the process of licensing, constructing, and operating the repository are made available to the Department of Energy. Nuclear energy is an inevitable component of both our energy present and our energy future. Congress recognized that fact when it enacted the Nuclear Waste Policy Act two decades ago. Congress reaffirmed that determination when it voted to proceed with the repository

program in 2002. The nation needs to move forward to assure the availability of a safe, permanent nuclear waste disposal site for future generations without further delay. The nation's electric ratepayers have been paying for a nuclear waste repository for over twenty years. North Carolina ratepayers alone have contributed more than \$1.7 billion dollars to the Nuclear Waste Fund since its inception. It is past time that the ratepayers get what they have paid for. The best way for Congress to assure that this result occurs is to reform the process of funding the repository program so that monies from the Nuclear Waste Fund are more readily available for use connection with the Yucca Mountain facility. We urge this committee and other relevant committees to make reforming the use of the Nuclear Waste Fund a priority in this Congress, to identify a way to provide stable financing for the program using the ample revenue stream that is available for the purpose, and to enact any legislation necessary to effectuate that decision. Thank you for your attention and I look forward to your questions.

Resolution Supporting Reform of the Nuclear Waste Fund

WHEREAS, In 1982, the Nuclear Waste Policy Act established policy that the federal government is responsible for safe, permanent disposal of all high-level radioactive waste, including spent nuclear fuel from commercial power reactors; *and*

WHEREAS, In 2002, the President recommended and Congress approved Yucca Mountain, Nevada as the location suitable for development as the disposal site; *and*

WHEREAS, Since 1983 ratepayers in States using nuclear-generated electricity have paid over \$20 billion in fees and interest, via their electric utility bills, to the Nuclear Waste Fund (NWF) in the U.S. Treasury; *and*

WHEREAS, Congress historically has only appropriated a fraction of the amount of revenue going into the NWF to develop the waste repository—resulting in a balance in the Fund, now over \$14 billion, which must be available to meet future disposal program needs; *and*

WHEREAS, The Department of Energy estimates annual appropriations will need to average \$1.3 billion from 2005-2010 to enable construction, waste package procurement and transportation to meet the goal of initial waste acceptance in 2010; *and*

WHEREAS, Previous attempts to address the gap between NWF revenue and annual appropriations have either never been adopted or may not have seemed necessary before the repository site was approved; *and*

WHEREAS, Congress is considering a bill, H.R. 3429, that would match annual appropriations for the disposal program with total annual NWF fee revenue and allow any funds not needed in any given year to be retained in the Fund only for future program needs; *and*

WHEREAS, The President has proposed to reclassify fees paid by utilities to the Nuclear Waste Fund in FY 2005 as discretionary offsetting collections equal to annual appropriations from the Fund as another alternative means of financing the nuclear waste program, should Congress authorize it in legislation, *now therefore be it*

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened at its March 2004 Winter Meetings in Washington, D.C., urges that the 108th Congress recognize that approving Yucca Mountain for development as the disposal site is not the end of Congress's ongoing responsibility to enable the Federal Government to meet its obligation to safely dispose of high-level nuclear waste; *and be it further*

RESOLVED, That Congress enact substantive reform—this year—of how Nuclear Waste Fund funds are appropriated, whether along the lines of H.R. 3429 or as proposed in the FY 2005 Department of Energy Budget, so long as whatever change is made has the result of ensuring the availability of sufficient funds in a timely manner to enable initial waste acceptance in 2010.

Sponsored by the Committee on Electricity

Adopted by the NARUC Board of Directors March 10, 2004

Mr. OTTER. Thank you very much, Mr. Ervin.

Ms. Howard.

STATEMENT OF ANGELINA S. HOWARD

Ms. HOWARD. Thank you, Acting Chairman Otter, Mr. Boucher, and Mr. Shimkus. I am Angie Howard, executive vice president of the Nuclear Energy Institute, and I am pleased to be here.

I have provided a written statement for the record. What I would like to do this morning though is to focus on two specific issues. The first is that the nuclear energy industry believes that legislation is needed to ensure timely funding to meet program milestones.

And, second, the industry is encouraged by the Department of Energy's progress with the program to date. Meeting DOE's schedule for the initial repository operations in 2010 requires certainty in funding for the program, particularly given that the projected annual expenditures will exceed over a billion dollars beginning in fiscal year 2006.

Over the past 11 years appropriations have been reduced by \$723 million below DOE's budget request. Funds should be made available when they are justified and not conditioned on annual budget constraints.

Further delay of the repository program would have significant financial implications as we have heard Secretary Card, as well as Dr. Chu; and actually Secretary Abraham has communicated to Chairman Barton that each year of delay could add nearly a billion dollars to the cost of the program.

We have heard a lot of numbers thrown around, but frankly a picture is worth a thousand words as someone said, and I do have a chart, and it is lit up behind my right. This chart shows that consumer fees, including interest submitted to the Nuclear Waste Fund, totals roughly \$23 billion.

Yet, only about a third of this funding, about \$8 billion, has been used for the program. In effect, this constitutes a taking of the American consumers money and spending it in an area for which it was not intended.

Consumers pay an estimated \$750 million to \$800 million into the fund each year. Those are largely funds that are generated through the generation of nuclear energy to the customers.

The balance in the fund is nearly \$15 billion, and must be available to the program with the appropriate Congressional oversight and we appreciate Mr. Boucher's comments on this.

Treating the funds paid into the Nuclear Waste Fund as offsetting collections as evidenced in the two bills that have been proposed, and the President's budget request, is consistent with general Federal budget accounting principles.

This treatment is also consistent with that of the end-user fees that are paid for the Nuclear Regulatory Commission's oversight. In addition, this approach will not adversely impact the deficits.

By reducing the risk of delays, it has the potential to reduce future Federal liabilities once it begins accepting this used nuclear fuel proposal. Under this proposals the programs will remain subject to Congressional oversight and I am confident that this subcommittee will continue its strong oversight of the program, and it will have the program continue to be subject to the annual appropriations process.

Mr. Chairman, Congress must approve the revisions to the funding process for fiscal year 2005. The budget request of the program for 2005 are \$880 million, and is an increase of more than \$300 million above the 2004, and it assumes that such a change has been made.

Absent Congressional action the Appropriations Committee will have to address a significant shortfall within discretionary spending totals before we fund the program. Predictable funding is a prerequisite for program success.

But it is not by itself sufficient. DOE and its contractors must continue to effectively manage the program, and demonstrate that the repository meets regulatory requirements for the safe and secure long term storage of used nuclear fuel.

DOE has improved the management of its Yucca Mountain program, and the industry is confident that the agency can meet its goal in submitting a license application by the end of this year, and will meet its 2010 schedule for opening a repository, assuming that sufficient funding is available.

DOE must also fully develop a comprehensive transportation plan to moving these fuels to Yucca Mountain. In December 2003, DOE did issue a National Transportation Strategic plan that addresses the interactions with State, local, and tribal governments.

The industry endorses the DOE's mostly rail strategy and the designation of the Caliente corridor for rail transportation in the State of Nevada.

The industry thanks the committee for its long-standing support to the safe and secure management of used nuclear fuel. This is vital if we are going to ensure the continued use of nuclear energy in our country, which does generate electricity for 1 out of every 5 homes and businesses in our country.

Developing a new funding process for the Yucca Mountain project is essential to complete one of the world's most important projects, and begin fulfilling its obligation to the American public. Thank you.

[The prepared statement of Angelina S. Howard follows.]

PREPARED STATEMENT OF ANGELINA S. HOWARD, EXECUTIVE VICE PRESIDENT,
NUCLEAR ENERGY INSTITUTE

Chairman Hall, Ranking Member Boucher and distinguished members of the committee, I am Angie Howard, executive vice president at the Nuclear Energy Institute. I am pleased to have this opportunity to testify on legislation to restore the Nuclear Waste Fund to the purposes established in the Nuclear Waste Policy Act of 1982 and on the progress toward establishing appropriate funding for the used nuclear fuel repository at Yucca Mountain, Nev.

NEI is responsible for developing policy for the U.S. nuclear industry. Our organization's 270 member companies represent a broad spectrum of interests, including every U.S. energy company that operates a nuclear power plant. NEI's membership also includes nuclear fuel cycle companies, suppliers, engineering and consulting firms, national research laboratories, manufacturers of radiopharmaceuticals, universities, labor unions and law firms.

America's 103 nuclear power plants are the most efficient and reliable in the world. Nuclear energy is the largest source of emission-free electricity generation in the United States, providing electricity for one of every five U.S. homes and businesses. Given this essential contribution to our nation's energy security and economic growth, Congress should adopt policies that foster the further development of emission-free nuclear energy as a vital part of our nation's diverse energy mix—and fulfill existing federal obligations, including the disposal of used nuclear fuel.

My testimony will focus on two issues. The first involves making necessary funding available in a timely manner to meet Yucca Mountain program milestones and maintain established operational schedules. NEI believes that legislation is needed to restore the clear link between electricity consumer fees and expenditures for the nation's used nuclear fuel disposal program. The second is the industry's assessment of the Department of Energy's progress with the nuclear waste management program.

Meeting DOE's schedule for initial repository operations in 2010 requires certainty in funding for the program, particularly given projected expenditures exceeding \$1 billion beginning in fiscal 2006. The Yucca Mountain program has a history of funding shortfalls. Despite consistent support for DOE's budget requests for Yucca Mountain in the House, billions of dollars contributed by American consumers solely for the federal government's used fuel programs have been diverted for other use. The program has experienced a \$723-million shortfall below DOE's budget requests in the past 11 years. While the reduction in fiscal 2004 was a modest \$11 million, funding was preserved only because House conference managers made it their top priority.

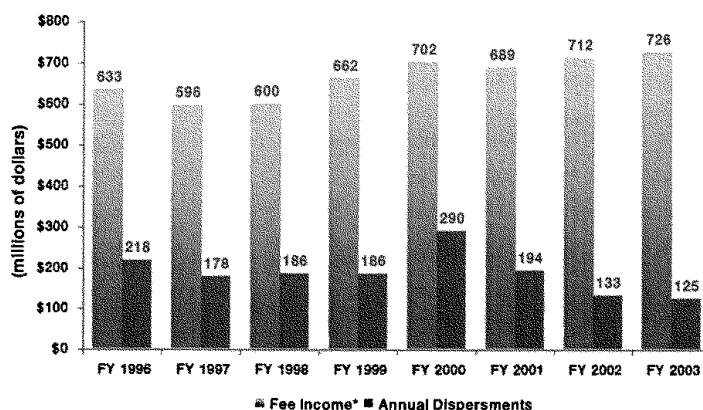
Program opponents attempt to delay the program through budget cuts and litigation. They attempt to use delay to effectively negate scientific consensus and the will of Congress to develop a repository at Yucca Mountain, subject to Nuclear Regulatory Commission approval. These dilatory tactics would set responsible environmental management back to square one. The Nuclear Waste Policy Act of 1982 created the Nuclear Waste Fund based on the premise that electricity consumers who benefit from nuclear energy should pay for the used nuclear fuel disposal program. To effectively implement this relationship, funds should be available when justified and not conditioned on annual budget constraints.

Funding shortfalls in past years have caused DOE to defer important programs, including procuring transportation containers for used reactor fuel; acquiring transportation and logistics services; creating the final grant process for providing emergency responder assistance; developing a transportation infrastructure in Nevada; and working with regional, state, tribal and local representatives from across the nation on transportation planning.

Further delay in the repository program will have significant financial implications. As Secretary of Energy Spencer Abraham stated in his Feb. 27 letter to Rep. David Hobson, chairman of the Energy and Water Appropriations Subcommittee: "Each year of delay could add nearly \$1 billion per year in costs for commercial utilities and federal defense nuclear waste sites to continue to provide temporary storage. These costs would be borne by the federal government, based on its existing contracts with electric utility companies."

Consumer fees, including interest, committed into the Nuclear Waste Fund since its formation in 1983 total \$23 billion. Consumers are projected to pay between \$750 million to \$800 million to the fund each year. Yet only about \$8 billion¹ has been used for the program. The balance in the fund is nearly \$15 billion. In each of the past several years, there has been a dramatic gap between the annual fee income and disbursements from the fund (see chart).

**Annual Fee Income vs. Spending
Nuclear Waste Fund**



Source: Office of Civilian Radioactive Waste Management FY 2003

*Does not include investment income

¹ \$7.6 billion has been used by DOE, \$350 million by other federal agencies

The Nuclear Waste Fund has three unique characteristics that justify modifying the current budget rules governing its use:

- The fund is intended to cover the entire cost of the federal government's commercial used fuel management program over several decades.
- The federal government is obligated by law and contracts signed with electric companies that operate nuclear power plants to implement the used fuel management program.
- The disposal of used nuclear fuel from commercial reactors is financed entirely through a 1 mill per kilowatt-hour fee established by federal law and paid by consumers of electricity generated at nuclear power plants. Not having these funds fully dedicated to the disposal program constitutes a taking from the American people.

Scoring the net budget impact of the used fuel disposal program is consistent with general federal budget accounting principles, because it more accurately reflects the complete impact of the program on federal budget and discretionary spending totals and is consistent with treatment of industry user fees to the Nuclear Regulatory Commission. It will not adversely impact deficits. In fact, by reducing the risk of program delay, it should improve the long-term federal accounts balance.

Although the program should remain subject to congressional oversight, Yucca Mountain program appropriations should not compete each year for funding with unrelated programs. The industry commends the committee for its long-standing support for reform of Yucca Mountain program budgeting, as most recently evidenced in the committee's approval of H.R. 45 during the 106th Congress and in H.R. 4 in 2002. During this committee's 1999 hearings on the issue, Chairman Joe Barton noted that one of the objectives of the legislation was to "protect consumers by halting the diversion of consumer fees to fund other federal programs."

Last year, Committee Ranking Democrat John Dingell, in a letter to Energy Secretary Abraham, wrote:

"It has been clear for some time that absent legislative action, money paid into the [Nuclear Waste] Fund will continue to be diverted to other purposes—an inequitable use of funds collected from utility ratepayers specifically to pay for the repository. If this continues, construction could be delayed even in the event DOE had already received NRC approval to build a repository at Yucca Mountain. In that event, waste would remain in *de facto* permanent storage at dozens of facilities which were not designed for this purpose—in Michigan and many other states, at even greater cost to ratepayers. Moreover, damages in breach of contract lawsuits against DOE would continue to mount and, as I understand it, could be paid from general taxpayer revenues."

This year, the administration submitted to Congress proposed legislation to authorize the reclassification of fees paid into the Nuclear Waste Fund as offsetting collections, in an amount equal to appropriations for nuclear waste disposal. Chairman Barton recently introduced the proposal as H.R. 3981. That bill is substantively similar to H.R. 3429, introduced by Reps. Shimkus and Rush last November and co-sponsored by six other committee members, including five members of the subcommittee.

Reforming the funding process is vital in FY2005, with the budget request for the program increasing to \$880 million, more than \$300 million above FY2004. These funds are necessary to support NRC review of the license application, to acquire long-lead items to support the transportation system and to execute detailed facility design.

The need to reform the funding profile is even more critical in view of the administration's assumption in its FY2005 budget that this legislation would be enacted. In addition, absent congressional action, the Appropriations Committee will have to address a significant shortfall within the discretionary spending totals to fully fund the \$880 million request.

Under the legislation, Congress could limit obligations in any year for the Yucca Mountain project if it determines less funding is needed, or could provide additional funds from the Nuclear Waste Fund balance, if required. In the latter case, funding above annual receipts into the Nuclear Waste Fund would be subject to discretionary spending limitations. Funding for the program from DOE's defense program account would remain subject to discretionary spending limitations. This approach, if enacted in FY2005, would provide sufficient funding for the non-defense portion of the program, based on DOE's requirements through completion of the surface facilities. The industry strongly urges the committee to approve offsetting collections legislation.

Although adequate and predictable funding is a prerequisite for program success, it is not by itself sufficient. DOE and its contractor(s) must continue to effectively manage the program. The Energy Department also must demonstrate that it will

meet NRC requirements for the safe and secure permanent disposal of used nuclear fuel at Yucca Mountain before it can operate the repository.

President Bush in 2002 signed legislation designating Yucca Mountain as the site for a national used fuel repository. DOE and its contractors are preparing an application to build the repository and are expected to submit it to the NRC in December. If approved, the license will permit DOE to build and operate the repository.

Congress approved Yucca Mountain as the site of the national repository in 2002. The policy question now before Congress is: When will Yucca Mountain be ready to accept used nuclear fuel? DOE plans to begin accepting used fuel in 2010-12 years behind the statutory deadline in the Nuclear Waste Policy Act. That law required DOE to begin accepting used fuel by Jan. 31, 1998.

DOE has improved management at the Office of Civilian Radioactive Waste Management (OCRWM), giving the industry more confidence that the agency can meet its 2010 deadline for opening the repository, assuming sufficient funding for the next six years. In addition, OCRWM has effectively implemented a Management Improvement Initiative using the same management principles that the nuclear energy industry has applied in building an exemplary safety record at the nation's nuclear power plants. The creation of DOE's Office of Repository Development in 2002 established strong project management. DOE also has made substantial progress in resolving the NRC's outstanding key technical issues for the Yucca Mountain project. The transition from scientific research to a licensing project team has been a critical transition at the Yucca Mountain site. Recently, DOE announced that it is pursuing several other far-reaching management initiatives, including annual comprehensive independent external financial, schedule and technical audits of the program.

These programs are further evidence of the Energy Department's commitment to a sound scientific basis for the project. The integrity of the scientists working on the program, the extensive and ongoing independent review process, the conservatism built into performance assumptions, and the extensive NRC review of the license application all enhance public and policymaker confidence in the Yucca Mountain repository. Repository operations will not begin until DOE can meet strict standards established for public safety and environmental protection.

Several critical milestones must be met to maintain the 2010 target for repository operation. The most significant of these—submitting a construction license application to the NRC—must be accomplished by the end of this year. The industry expects DOE to meet this milestone. After DOE files its license application, the NRC must issue a decision on the application and conduct public hearings within four years, using the same safety-focused, performance-based principles it applies to licensing nuclear power plants.

DOE also must proceed with land withdrawal and transfers, site preparation, and preliminary construction to meet the 2010 date. Congress should specifically instruct DOE to begin these activities before the NRC's final authorization of repository construction.

Planning for a comprehensive transportation program to transfer used fuel to the repository also must be fully developed. This planning will build on the comprehensive transportation program that has been used for 40 years to safely transport 3,000 shipments of used fuel across 1.7 million miles. In December 2003, DOE issued a National Transportation Strategic Plan for developing a nationwide transportation program, with input from state, local and tribal governments, as well as the industry. DOE must implement this strategy.

The industry's transportation policy endorses a predominantly rail scenario contained in DOE's Yucca Mountain Environmental Impact Statement. This scenario recently was identified by the department as its preferred transportation strategy. NEI also supports the use of dedicated trains for used fuel transportation to the repository. Transportation planning must include extensive consultation with state and local officials consistent with DOE's December 2003 strategy.

It is encouraging that the Secretary of Energy has also identified a preferred rail corridor within Nevada for transportation of used nuclear fuel to the repository. The Secretary's action is consistent with direction provided last year by the House, which concluded that the Caliente route is the most feasible corridor to Yucca Mountain. It is also consistent with what Nevadans prefer. In a June 2003 public opinion survey of Nevadans by Voter Consumer Research, 56 percent said they would find "acceptable" rail transport of used nuclear fuel through rural routes, away from major cities like Reno or Las Vegas. In contrast, 88 percent find truck transport through major cities like Reno or Las Vegas unacceptable.

The industry encourages DOE to proceed further with the development of a comprehensive transportation program.

This timely action supports the department's objective of beginning construction of a rail line immediately after a decision on construction authorization, expected by 2008. That would make rail transportation available for used fuel shipments early in the program and minimize the need for truck shipments within the state.

The industry also supports funding the state of Nevada and affected units of local governments for appropriate oversight of the repository project and local transportation preparedness. This would include federal assistance to mitigate the social and economic impacts of the program, consistent with Section 116 of the Nuclear Waste Policy Act.

Each of these DOE milestones must have a clearly defined schedule, with implementation plans linked to funding requirements, if the federal government is to meet its 2010 goal for opening the repository.

CONCLUSION

The industry thanks the committee for its long-standing commitment to implementing public policy that ensures the safe and secure management of used nuclear fuel from nuclear power plants and high-level radioactive waste from the nation's defense programs. Developing a new funding process for the Yucca Mountain project is essential to complete one of the world's most important environmental facilities and pave the way for the U.S. government to begin fulfilling its legal obligation to move used nuclear fuel from 40 states to a secure and safe federal repository.

Mr. OTTER. Thank you, Ms. Howard.
Mr. Mitchell.

STATEMENT OF JOHN T. MITCHELL

Mr. MITCHELL. Mr. Chairman, and members of the subcommittee, and members of the staff, we appreciate the opportunity to discuss this with you today. I am the President and General Manager of Bechtel SAIC, and that is a limited liability company formed as a partnership between Bechtel International and SAIC expressly for the limited purpose of serving as the management and operating contractor to DOE and Yucca Mountain.

And in that vain our responsibilities are several. One, we are in fact the people who take the scientific data that is provided by the national laboratories and other Federal agencies of the last 15 to 20 years, and combine that into a document which is in fact the license application, which will be submitted in December to the NRC.

It will be of high quality and we believe a fully docketable license application submittal at that time. In addition to that, we also performed the engineering construction planning leading to the next steps for the repository, moving from the design necessary to support the license application, to the engineering design and construction, and eventual operation of the full repository.

We also support the Department in putting in place a culture appropriate to a regulated entity, which provides a basis of competency to the NRC to assume that we can and will honor our obligations on behalf of the DOE for the long term.

As a professional project manager probably my strongest comment about funding would be a simple one. I have managed major projects for the government in many places for a long time. This project has been marked with every year, except for fiscal year 2004, by funding which is less than that planned, and less than that previously requested on many occasions.

This results in instability and insufficiency time after time as you are well aware. I am very pleased with the funding support that we had, particularly from the House in the last year.

We were able to stay in our plan going into fiscal year 2004, and we are in fact on track, and will submit a license application in December 2004, which will serve the NRC's needs.

We have also continued on the process to do the things necessary in the project to ensure with confidence that we can in fact open the repository in 2010 and fill its designated mission.

I would ask particularly for the committee's attention to the fact that it is more critical than most over the next several years to have stability, ability, and predictability in funding.

When you enter into the stage of actually proceeding beyond science and actually into the engineering design and construction, these are related serial activity and dependent upon each other, and vitally dependent for their success and efficiency in being able to sustain a plan.

That is where we are in the program, and that is where we have proceeded, and we urge your support. Thank you, sir.

[The prepared statement of John T. Mitchell follows.]

PREPARED STATEMENT OF JOHN MITCHELL, PRESIDENT AND GENERAL MANAGER,
BECHTEL SAIC, LLC

Mr. Chairman and Members of the Committee: Thank you for the invitation to appear before you today and report on the progress made on the Yucca Mountain Project since the last oversight hearing in June of 2000. As you know, significant strides have been made and I am confident that, given adequate funding, the Project is on track to submit a high-quality docketable license application to the Nuclear Regulatory Commission by the end of 2004 and begin waste acceptance at the repository in 2010.

Before I begin with Project-specific testimony, let me tell you who I am and who I represent. My name is John Mitchell and I am the Bechtel/SAIC Project Manager for Yucca Mountain Project. Bechtel National, together with Science Applications International Corporation, formed Bechtel SAIC Company, LLC (BSC) to be the management and operating contractor for the Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM) Program. We were awarded the five-year contract in November of 2000 and began work in February of 2001.

In July of 2002, after strong votes of approval in both the Senate and House, President Bush signed a Joint Resolution (PL 107-200) designating Yucca Mountain as the site for our nation's permanent repository for spent nuclear fuel and high-level radioactive waste. This site recommendation was the culmination of more than 20 years of scientific study and represents a major milestone in the development of the repository. The recommendation allows DOE to take the next step in establishing a safe repository—submittal of a License Application to the Nuclear Regulatory Commission (NRC).

DOE plans to submit the License Application by December of 2004. The application will include an overview of the repository's engineering design concept as well as a safety analysis report demonstrating how the repository can be constructed, operated, and closed in a manner that protects public and worker health and safety while preserving the quality of the environment. DOE has the strong support of our national laboratories to aid in the scientific and investigatory work that is ongoing. DOE, BSC and the national labs are all working together effectively in support of our one common goal—constructing and operating a first-of-its-kind, world-class facility to store this nation's spent nuclear fuel and high-level radioactive waste.

We are aggressively proceeding with numerous activities in support of the December 2004 goal. Design work is underway on both the surface and subsurface facilities and progress continues on both the Preclosure Safety Analysis and the Total System Performance Assessment. Other activities include completing and certifying the Licensing Support Network no later than June 2004.

In addition, work proceeds on closing the nine Key Technical Issues (KTIs) identified by the NRC in pre-licensing interactions. 293 agreements were made prior to site recommendation, largely for documentation and data confirmation. The NRC used these agreements as a basis for their sufficiency comments that accompanied the site recommendation. As of March 17, 2004, 213 of these agreements have been submitted to the NRC with 90 closed and 123 in various stages of NRC review. 80

remain to be addressed and submitted to the NRC between now and License Application in December 2004.

Becoming an NRC licensee is more than closing KTIs and filing a license application. BSC is working closely with DOE to implement a nuclear operational culture to ensure the effectiveness of licensing, design, and construction activities under NRC oversight. As we enter this environment, together we must do a number of things to gain and keep regulator confidence and trust. First and foremost is establishing a strong and sustainable safety culture.

As part of the Management Improvement Initiatives (MII), a program established last year to identify and focus attention on changes necessary to be a successful license applicant, a rigorous Safety-Conscious Work Environment, where every employee is free to raise and resolve concerns without fear of retribution, is being strengthened on the Project. I am pleased to report that consecutive surveys have shown improvement in employee attitudes and perceptions. The results are encouraging and both BSC and DOE are committed to addressing the results of these surveys and continue making improvements.

As part of the MII, we have completed a major reorganization of BSC that reflects a move from a functional structure to a line-accountability, project-focused structure. I believe this new structure will better reflect the work to be done and will allow for closer coordination and integration of Project personnel and activities.

I have also brought to the Project a new Quality Assurance manager with directly applicable experience to revamp and revitalize this important function. Quality is not just a buzzword—it is our integrity and our credibility. It is the only acceptable way to do our work and the first step for a successful License Application. From the top down, our organization is devoted to achieving quality in everything we do so that we might provide an objective and visible basis for confidence that we are doing things right the first time. Quality is each individual's responsibility and senior management will assure that clear direction and accountability are provided for a visible and effective process.

The majority of our work between now and December 2004 will focus on the License Application. We are on schedule to submit a complete, high-quality LA to the NRC by the end of this year. Once the NRC receives the LA, it will conduct extensive technical reviews and hearings during which it will consider the scientific and design information submitted on the repository. The NRC will grant a construction authorization only if it concludes from its investigations and public hearings that the repository will protect the safety and health of workers and the public.

If construction authorization is granted, DOE will begin initial construction of the repository. This may occur in early 2008. Before completing construction, DOE would have to update its LA for a license to receive and possess waste. If the amended license is granted, initial receipt of waste would begin in 2010.

You may have noticed a lot of "ifs" in my previous testimony. That's because this Program, which has one single focus—to build a permanent high-level waste repository, will only succeed if—there's that word again—if it is fully funded by the Congress. The Department cannot begin repository operations by 2010 if adequate funding is not available to license and construct a facility. Nor will waste be moved if we don't have a transportation system up and running in time. Yes, lots of things other than money are required for success but cold hard cash is the lynch pin. Without it, all the hard work and good intentions of the thousands of people involved will not make the project a success.

As you are all well aware, this Program has a long history of being significantly underfunded and thus, behind schedule. FY2004, thanks to Chairman David Hobson, was an exception—the Program was funded at only \$11 million less than the Administration's request. And because we received adequate funding, we have maintained our 2004 schedule—even with five months of a Continuing Resolution—and are on track to submit a high-quality, docketable License Application to the NRC by the end of this calendar year.

As I mentioned earlier in my testimony, receipt of waste in 2010 is heavily dependent on adequate funding. Success is achievable, but will be jeopardized if the Program suffers from inadequate funding. Full funding of this Program has always been crucial, yet from 1986 to 2003, appropriations have consistently fallen short of the budget request.

Steady and adequate funding is crucial as we make the critical transition from scientific site investigation to preparation for licensing, constructing and operating a repository. Past underfunding has forced the DOE to delay and reprioritize the work leading to successful milestone achievement. Continued underfunding, and the delay that inevitably follows, will only increase costs to the federal government—for both storage of defense waste and liability to civilian reactors. Some estimate the cost of delay at \$1 billion a year.

This year, funding the Project is not as simple as merely requesting and receiving an adequate appropriation. Though the Administration's request of \$880 million is large and adequate for this year's Project activities, the request assumes passage of legislation to "fix" the Nuclear Waste Fund by reclassifying fees as offsetting collections. Without this, or a similar fix, the appropriations committees will be left with a \$750 million shortfall—a very serious problem for both appropriators and the Project.

I urge the Members of this Committee to give very serious consideration to the bills that are the subject of today's hearing—HR 3429 and HR 3981—and recognize that without the solution they offer, this Program cannot succeed. I am a project manager, not a lawyer or legislator so I won't tell you how to fix the funding—I can just tell you it needs to be fixed. If I, or any other project manager, is given funding adequate to the task, then I will succeed at that task. Inadequate funding will only lead to more delay and eventual failure of the project.

I cannot emphasize enough the importance of adequate funding. We are already operating on the margins as a result of previous cuts and cannot withstand much more without schedule slippage. Any less than the budget request for FY2005 seriously jeopardizes receipt of waste in 2010. Any funds in addition to the request would increase confidence that we could meet the 2010 date.

Thank you for your time. I am happy to answer any questions you may have.

Mr. OTTER. Thank you, Mr. Mitchell. I would now recognize the ranking member to open the questions.

Mr. BOUCHER. Thank you very much, Mr. Chairman. I am going to ask just one question, and I will begin by asking you, Mr. Ervin, the legislation that we have before us, two versions of it actually, accomplish the same goal and that is to provide some greater level of assurance that on a going forward basis the revenues that are paid into the fund are derived from the utilities that have nuclear energy, and are actually spent for the intended purpose.

Both of those bills would affect approximately \$770 million on an annual basis, and I think that there is a general agreement here that we need to do that at a minimum. My question to you is, is that a sufficiently ambitious agenda at this point?

We still have \$14 billion in payments previously made from the electric utilities into this fund, and much of that money in the past has been diverted to other purposes. We really have no guarantee as we look at the matter today that this money ultimately is going to be spent as it was designed to be spent.

And should we not at this point legislatively be taking some steps to provide assurance not only with regard to the \$770 million coming into the fund annually in the future, but also with regard to the \$14 billion previously collected and now placed in the fund?

So, Mr. Ervin, your comments on that, and then I would welcome comments from the other two witnesses.

Mr. ERVIN. The short answer to your question is that NARUC would certainly like to do that, but I cannot speak for what is politically possible within this body. But in addition to—

Mr. BOUCHER. But it is your view as the NARUC representative is that we should be a little bit more ambitious and undertake that greater challenge?

Mr. ERVIN. NARUC believes that every penny that has been paid into the Nuclear Waste Fund should be used and made available easily for the purposes for which it was intended. We have endorsed the specific pieces of legislation because we favor what they do, but I would agree with the implication of your question that the other \$14 billion ought to be accessible as well. And our resolutions and our membership I believe would support any legislation that did that.

Mr. BOUCHER. Thank you, Mr. Ervin. Ms. Howard.

Ms. HOWARD. We would certainly agree.

Mr. BOUCHER. Thank you, Ms. Howard. Mr. Mitchell.

Mr. MITCHELL. Anything that can be done to stabilize the funding ensures the success of Yucca Mountain.

Mr. BOUCHER. Well, the three of you have provided a truly excellent series of answers to my questions, and I thank you. Thank you, Mr. Chairman.

Mr. SHIMKUS. You are welcome. Now you can run and vote, and I think after you guys put up with me, you will be done, and we may have a few members matriculate back here after a few votes.

Mr. Ervin, good to see you again. I think that those rate issues that you mentioned, if we would just move the standard market design, there might be some savings there. I know that we have a disagreement on that, but I am sure that is another—

Mr. ERVIN. I was going to say that I came back with the express purpose of making you happier this time.

Mr. SHIMKUS. But I think that we are on the same side, which is good. I have got a quick series here. Mr. Mitchell, in your written testimony or in the written testimony of Chairman Diaz, he points out that quality management remains a challenging program area for DOE, one which the NRC staff continues to monitor.

What can you tell me about Bechtel's quality assurance program at Yucca, and is it fully effective and implemented to your satisfaction?

Mr. MITCHELL. I would say that we are on a path to continuous improvement, which will be consistent with the license application of being able to meet and sustain quality requirements acceptable as a regulated entity.

Mr. SHIMKUS. And following up other questions previously, do you think that you have enough technical staff with the knowledge, and skills, and abilities to review the application, and in a fairly informed and timely manner?

Mr. MITCHELL. We certainly have that. Our job of course is to produce this, as well as to review, as we go along, and I believe that you will find and as we have stated that we do in fact have those resources.

Mr. SHIMKUS. And what about the NRC staffing management, or not just management, but the staffing positions? Do you think they have enough to meet the demand? I think you probably heard me ask earlier, what we are trying to make sure is that there are resources and personnel are in place to meet the December time line.

Mr. MITCHELL. Yes, sir, we have a structured set of interactions with the NRC that have been doing on for some period of time. We have found those steps to be excellent, and we have found them to be interactive, and to this date we have found that the resources they have are applicable and apply to substantially what needs to be done in the process.

Mr. SHIMKUS. Great, and again following up on this line of questioning, I talked about the 80 remaining key technical issues. Will you be submitting these 80 with enough time for the NRC to review them to make the December time line?

Mr. MITCHELL. We believe so. Right now it is our intention to fully conform to those agreements that we have with the NRC.

Mr. SHIMKUS. Great. Thank you. Obviously that continues with the ranking member's comments. We appreciate this testimony.

Commissioner Ervin, it is my understanding that for each day or each year we delay the 2010 waste acceptance date for Yucca Mountain that an additional \$500 million in costs will be incurred.

But your testimony points out that this \$500 million figure is just a tip of the iceberg, because it only accounts for the additional government's costs of managing government high level waste, and not the costs incurred by commercial nuclear plant sites.

Can you discuss this further and describe how much it will cost the private sector if we delay the opening of Yucca Mountain? And, of course, I am from Illinois, and we have incurred great costs through a trust fund in trying to receive some benefits from all those costs.

Mr. ERVIN. Well, I think that Illinois and North Carolina are one and two according to our calculations, but I don't know the exact non-governmental costs. I do know, however, that there are at least two respects in which non-governmental costs should include.

First of all, we have as you know a series of lawsuits pending by the nuclear facilities against the DOE for non-acceptance of fuel by 1998. The longer the non-acceptance period lasts the higher the damages are.

Second, as you know, we have got to store the fuel somewhere in the interim, and there are costs associated with that, and I can't speak for how it is done in Illinois, but I know that in North Carolina, under our normal rate making processes, the costs of such storage would be previously incurred costs and it would be included in the utility rates.

And so you have at least those two types of costs. I can't quantify them because I just don't know what the answer to that is, but it would appear to me that those costs would be substantial as best as I can tell.

Mr. SHIMKUS. Based on the facilities that you are knowledgeable with what is the onsite capacity and are you close to relicensing, and do you have close to some that have full storage space, of which—I mean, there would really be a cost if you had to stop producing.

Mr. ERVIN. I don't think that any of our facilities that serve North Carolina are to the point of running out of storage space, and therefore having to close. I understand that there are some in the rest of the country. As an example, Minnesota that comes to mind.

We have had to move some fuel around within North Carolina utilities, and I am not sure if that is because of a lack of storage space, or whether that was just an attempt at managing the fuel better.

But our facilities are in the process of obtaining license extensions. Some have already obtained several license extensions, and I believe all of the companies that serve North Carolina either have obtained such extensions, or in the process of attempting to do so.

The end result is that—and as you indicated—we are going to continue to use these units, and they make up a substantial portion of the electricity that is consumed in North Carolina, and in

order for us to continue to serve our citizens, we are going to have to have a way to store this fuel.

And it seems to us that solving the kinds of problems which your legislation addresses is at least a step in the right direction toward doing that.

Mr. SHIMKUS. Ms. Howard, you are nodding, and is there something that you want to add on this debate?

Ms. HOWARD. Well, just to add on that most of the nuclear plant sites in the country have had to add additional storage capacity either in the form of expanding the pools themselves, or how to manage the pools, or putting them in what is known as dry cask storage.

And it is a substantial cost that the companies are incurring, and at the same time paying in the one mill per kilowatt hour of generation from the nuclear plant.

Mr. SHIMKUS. What percentage of these are in major metropolitan areas that you would envision? Is it 50 percent, or 75 percent of these facilities?

Ms. HOWARD. I would say closer to 50 percent or less. Again, it is that most of them are east of the Mississippi.

Mr. SHIMKUS. Well, it is critical on the debate on the whole Yucca Mountain to continue to make the argument there still are facilities in major metropolitan areas, urban areas, and suburban areas, versus a desert under a mountain.

Ms. HOWARD. And the way that the program was envisioned, because Mr. Markey asked a question that you would still have fuel being stored for the first 5 years, and that was the way the plan was originally designed, and it appears adequate to store that for the cooling period.

And then the assumption that you would then be shipping to the Federal repository, and what we have had to add is adding capacity at the pools, and now the dry cask storage, and that was a technology that truly was developed because of the government's inaction in moving forward with Yucca Mountain.

Mr. ERVIN. Just to give you an example, and again this is antidotal, but of the seven nuclear units that the Depaul Company operates that serve North Carolina, four of them are very close to Charlotte.

One of the four units that Progress Energy uses to serve its territory is real close to Raleigh, and two of them are relatively close to Wilmington. So the implication of your question that a lot of these plants are fairly close to at least what in North Carolina would be major metropolitan areas is certainly true.

Mr. SHIMKUS. And I can speak to the Chicago land area and the facilities there. Ms. Howard, and this will be my final question, you have heard the debate on the time line, in December 2010. From the industry's position do you think we are on track?

Ms. HOWARD. Yes, we do, and again in my testimony, I mentioned that caveat, that with sufficient funding, and with sufficient management in both of the programs, and appropriate oversight.

We are very positive that the Department of Energy and its program management is going to make that application and we are providing the industry support that we can to make sure that anything that they need from the industry will be available to them.

Mr. SHIMKUS. Well, I think you see some excitement from most members of the committee, and we look forward to working with you and following this process to work, because we believe that it is very important for all of those citizens of this country, and based on generation remaining as part of the nuclear power industry. So I thank you, and seeing no other members, I call this hearing adjourned.

[Whereupon, at 1:02 p.m., the subcommittee was adjourned.]

